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ORIGINAL COMMUNICATIONS.

A CASE OF VESICO-VAGINAL FISTULA.

By N. B. HERRING, M.D., Wilson, N. C.

Cherry Ricks, a Nash county colored woman, aged 32 years, gave birth to her seventh child, April 26th, 1882. On May 10th she found herself unable to hold her water, and on the 12th I was called to see her. I found her external parts very much bruised and swollen, and the urine dribbling from the vagina.

Suspecting a rent in the bladder, I passed a common male sound through the urethra and had no difficulty in bringing it into the vagina at the very base of the bladder where the slough took place. I advised nothing but cleanliness, and to this end furnished her with a Davidson syringe and taught her the use of it.

September 15th she placed herself under my charge for treatment. She was in a miserable condition from ignorance and neglect, and her general health rapidly failing. I was willing to cure her but didn't know how. I studied the books and got a fair idea of how the operation should be performed, but every time I examined the rent I saw untold difficulties, and in the hope of a little light I wrote to Dr. Emmet, of New York, describing the case, deploring my ignorance and begging the assistance of his great experience.

The reply I received from Dr. Emmett was so discouraging that my plausible zeal to add to my own laurels and to relieve the poor woman almost forsook me. However, I kept on trying to improve her condition, and at the end of several weeks had got about ready to cut and sew, when her husband took her home, declaring he could not and would not be taxed further.

She could only get worse at home, and on April 29th, 1883, she came back fully determined to remain until operated on. Her menstruation had ceased for three months, and I found her womb badly retroverted and the neck sloughing. Both lips were so soft and spongy that a tenaculum would tear through its hold when deeply hooked in and very little traction force used. Her general health had suffered much from the constant annoyance and irritation of the unnatural flow of urine. The anterior edge of the fistula was so inverted and rolled upon itself that it was extremely difficult to turn it out so as to get a view of its edge. It was, however, in a pretty healthy condition and required no local treatment.

I commenced treatment by forcibly anteverting the womb with Sims' repositor, and applying tinct. iodine to the sloughing neck. This produced a great deal of pain for several days, but with purgatives and opium she soon had a flow, and her general condition gradually improved. For nearly three months I applied Churchill's tinct. iodine to the whole external and internal neck twice every week, and so managed by stretching and manipulating the vagina with speculum, and the urethra with sounds, as to get rid of the morbid sensitiveness which made the first examinations so difficult and unsatisfactory. The fistula being at the very base of the bladder, the neck of the retroverted womb protruded through the rent and lay constantly inside of the bladder, and the continuous maceration in a briny bath of urine produced the sloughy and softened condition of the cervix.

As soon as menstruation was reëstablished the uterus regained its normal position, and by the 19th of July, the date of operation, the cervix had become hard and tough enough to bear the sutures.

Assisted by Drs. Ruffin, King and Nathan Anderson, of Wilson, and Dr. Wright Barnes, of Toisnot, I commenced the operation by injecting half grain morphia sulph. into the large muscles of the buttock, and placed her in the left lateral position of Sims. With tenaculums I unrolled and everted the front edge of the fistula until

I could see the mucous membrane of the bladder; then with a very small, straight, sharp pointed tenotome, transfixed the mucous membrane of the vagina, following Thomas' directions minutely. Slowly and continuously I cut up and down, unrolling every line of the inverted edge, keeping close to the vesical mucous membrane, and maintaining the width of my cut—about half an inch. At the lower angle of the fistula where the bladder joined the uterine neck I lost my circle of tissue by cutting it in two. This was caused by the blood and urine, and my fear of cutting away too much. From the upper angle, I proceeded with the paring along the neck and anterior lip of womb, down to the lower angle when the circle was completed. This occupied much more time than it takes to write it down, but the work was well done.

The urine and blood were kept syringed away with a long-nozzle uterine syringe, a much more satisfactory way of getting it out of the way than by sponging. Ten wire sutures were then put in deeply and firmly about three lines apart. This was the most tedious part of the operation and during the time another half grain of morphine was administered hypodermically, and some whiskey given by the mouth. After the sutures were all inserted, I introduced the nozzle of a Davidson syringe into the bladder through the urethra, and pumped in about a gallon of tepid water. This thoroughly cleansed the bladder of blood, and the cut edges of the fistula looked blanched and clean.

Nothing was left to do but bring the cut edges together and twist the suture when the operation was completed. It took four hours to do the work, and the patient's suffering amounted to very little. The wound healed by first intention and the cure was perfect. When the edges were drawn together they fitted in a beautiful semi-circle, the front margin clasping and hugging the neck and anterior lip of the uterus like a well fitting garment. Not the slightest trace of inflammation could be seen when the sutures were removed, and a month afterwards it was difficult to trace the line of union.

This case presents several interesting features. It shows that such work can be done by others than experts, and that an armamentarium of instruments is not necessary. (\$25 would pay for all that were used, and there were plenty). The bladder was donched *before* the rent was closed, which made it unnecessary *afterwards*.

The time occupied may be objected to, but 'tis said "nothing succeeds like success," and as no anæsthetic was given, and the patient suffered so little, there was no need for hurry; furthermore, the long time gives the bloodvessels a chance to close, preventing any oozing into the bladder after the operation.

SUB-ACUTE AND CHRONIC RHEUMATISM.

A Clinical Lecture delivered at the Philadelphia Hospital.

By WILLIAM PEPPER, M.D., LL.D.,

One of the Physicians to the Hospital and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CAROLINA MEDICAL JOURNAL.

GENTLEMEN :—I shall ask your attention to-day to two cases illustrating different forms of sub-acute and chronic rheumatism. This young man, W. R., presents to us the sub-acute stage of ordinary articular rheumatism. In a man of fairly good health, without any evidence of strong rheumatic diathesis, and therefore, amenable to treatment. I ask your particular attention to his youth, to the previous good health and to the absence of strong constitutional diathesis as forming most favorable features in his case. The following is his history:

W. R., age 29, family history good. He enjoyed good health until three months ago, when he suffered from pain in his back. A friend advised him to take a vapor bath. This he did by sitting on a chair, covering himself with a blanket and boiling water beneath the chair. Having thus relaxed his system and rendered himself unduly sensitive, he probably exposed himself to cold and increased the disease. He was then attacked with severe pains in the joints and rheumatic fever, lasting a week, when he became somewhat better, but could not resume his work on account of the pain in the

joints which was so severe that he could hardly walk. He was admitted to the hospital September 26th, 1883, since his admission, he has gradually improved, until now he considers himself almost well. His treatment has consisted of the administration of five grains of guaiacum, with ten drops of the wine of colchicum root and five grains of nitrate of potassium three times a day. Externally, over the painful joints an ointment consisting of ten grains of aconitia with one ounce of cosmoline has been employed.

The shoulders, knees, ankles and joints of the feet, have been the ones principally involved. The joints were swollen, somewhat warm, and tender on handling. The attack appears to have begun as a slight rheumatic attack which was rendered general, by exposure after copious sweating.

Inflammatory rheumatism occurs more rarely in some persons than in others. Some do not get it no matter how much they may expose themselves, while others get it on the slightest provocation. We recognize, therefore, in reference to this disease, as clearly as we do in reference to any disease that we know of, the question of constitutional diathesis. This cannot be overlooked. It is difficult to say wherein this condition consists, for those who have the rheumatic diathesis, often appear to be vigorous and strong in all ordinary ways and yet are liable on slight provocation to severe spells of inflammatory rheumatism. As a rule, these persons have very active skins and sweat easily and thus, are liable to be readily affected by changes of temperature and have the cutaneous action suddenly checked and a revulsion on the system produced and it is probable that in this excessive activity of skin, lies a part of their susceptibility to rheumatism, since the attack will nearly always follow checking of the cutaneous circulation; but behind this, there must be some peculiarity about the chemistry of such people. Their secretions must be acrid or excessively acid or there must be some peculiar unstable equilibrium about their digestion which is upset by trifling causes and thus the food does not undergo its proper changes, primary assimilation is interfered with and irritating and acid substances are developed in the gastro-intestinal canal, are absorbed into the tissues and serve as exciting causes of these attacks. We recognize then in such persons a tendency to chemical disturbance and very often this peculiar exaggerated susceptibility of the surface, which

makes them peculiarly liable to the influence of atmospheric changes; and yet, this condition may be associated with excellent general health. In proportion as this diathesis is strong will you as a rule, find it difficult to cure such patients of their rheumatism. In proportion as the general health remains good you will find that the diathesis can be overcome, while if there are any causes such as excessive labor, anxiety, or as adverse circumstances by which the general health has been reduced while the susceptibility to rheumatism remains strong, you will find that the attacks of rheumatism are intractable and apt to run into the chronic form. I advise you when beginning the treatment of a case of rheumatism which has gone beyond the acute stage, to weigh carefully, as far as is possible, these two considerations. First, whether or not the patient is the subject of rheumatic diathesis, and second, whether his general health is up to par, or whether he is in a condition of depraved and depressed vitality. Not only will your prognosis be influenced by these points, but if you are wise, you will let your treatment be largely influenced by them.

If this patient had been treated vigorously and promptly in the beginning, he would probably have recovered without difficulty. This illustrates a fact in rheumatism that no matter how good the health of the patient may be, at the time of the attack, and no matter how slight the diathesis may be, the disease always tends to relapse and run into a chronic or sub-acute form. It is a disease upon which you cannot relax your hold, until it is absolutely cured and not only cured but until the patient has returned to his normal standard of health.

This patient might have been cured by one of the various methods of treating rheumatism. A course of salicylic acid or salicylate of soda on the pure alkaline treatment with acetate and bicarbonate of potassium would have cured him. Both of these are excellent plans of treating acute rheumatism, but when the disease has passed into a sub-acute form, more benefit will be derived from other remedies than from the salicylates or pure alkalies. Among these remedies may be mentioned iodide of potassium, colchicum or guaiacum. These are constantly prescribed in the form of combination. The following formula was recommended by an old druggist of Philadelphia and makes an excellent emulsion.

R

Potassii iodidi

Pulv. guiaci āā gr. lxxx.

Vini colchici rad.. 3 ij.

Pulv. acaciae, et sacchari, q. s.

Spr. lavendulae comp., 3 vi.

Aque q. s., ut ft., 5 viii.

Misce.

Sig. A tablespoonful three times in water, three times a day.

This combination is very effective. It may be modified as circumstances require. If the stomach were very susceptible, I should begin with a teaspoonful and gradually increase the dose.

Iodide of potassium is usually well borne in this condition, but is not so well borne as in syphilitic patients, for in that disease it rarely produces symptoms of iodism no matter how large the dose may be. In ordinary conditions of disease, it is surprising to what small doses, we must restrict ourselves, from one to two and a half grains being the utmost that many patients can take, while five to ten grains will produce serious symptoms of disturbance. I always begin with a dose of two or three grains and increase it as I find the system tolerates it.

If the case is more acute and particularly if the febrile action continue, with scanty urine and acceleration of the pulse, nitrate of potassium may be substituted for the iodide, in doses of from two to five grains. This was the mixture ordered for this patient, and under this treatment he has made a good recovery.

I shall devote a moment to the combination of external applications. In acute rheumatism the question of local applications is an exceedingly important one. Many of you are probably aware that in cases where the effusion into the joint is not very marked and the number of joints involved not great, the use of stimulating applications over the affected joints, exerts a positive remedial influence upon the course of the disease. I have even seen this proposition seriously advocated,—that rheumatism could be successfully treated by the use of blisters alone and that the best spot for the application of the blister was over the heart and the next best place, over the joints most affected. It is a fact that in rheumatism where the joint trouble has been obstinate and where the fever has been persistent and the pulse

considerably excited, while the remedies which we are accustomed to regard as somewhat specific in their action, have not cut short the course of the case, but on the other hand seemed to upset the stomach and interfere with nutrition, that the abandonment of the salicylates and alkalies and the substitution of an ordinary tonic treatment directed to the state of digestion, and the use of external remedies of a counter-irritant character, will sometimes rapidly modify the course of the case in a favorable manner. In such cases I have frequently seen, even where there were no physical signs of endo- or pericarditis, but where there was persistent high temperature, rapid pulse and nervous disturbance, the application of a blister over the præcordia do positive good, and the use of blisters over the affected joints be followed by a rapid subsidence of the local symptoms. In the present instance, the pains in the joints was hardly severe enough to justify the use of blisters.

When the effusion into the joints and the infiltration around the joint is not great an ointment of veratria and mercury will be of great service. If it is to be applied over a considerable extent or if the skin is particularly sensitive, I employ the prot iodide of mercury, but when the space involved is not large and the skin not sensitive, the biniodide may be used. The ointment may be prepared according to the following formula :

℞
 Veratriæ.
 Hydrarg. protiodidi, āā 3 i.
 Cosmoline, 5 i.
 Misce et. ft. unguent.

This is a powerful anodyne and at the same time alterative, and is also capable of promoting the absorption of inflammatory exudations beneath the skin. There is a caution to be heeded in using veratria. After it has been applied, the hands must be carefully washed, for if any of the drug should be carried to the eyes, it will set up a severe, although not dangerous conjunctivitis. The patient is to be especially cautioned on this point for veratria causes a peculiar tingling and the patient is very apt to scratch the part and then inadvertently rub his eyes with the hand. The liability of the drug to get in to the eyes is especially great where it is used to control those violent

supra-orbital neuralgias, in which it is almost a specific. The biniodide which is more irritant than the protiodide, may in the cases indicated, be substituted, using thirty or forty grains to the ounce. In the present case an ointment of aconitia, (grs. x to the ounce) was employed. This is also a useful application and its anodyne action is certain and positive.

Although both veratria and aconitia are powerful depressants of the heart, I have never seen any dangerous depression of the circulation, from their use even when employed twice a day in the strong proportion which I have indicated and over several parts of the body. I should not like to use them extensively over areas, where the skin is peculiarly absorbent, as over the chest and the inside of the thighs.

Let us now turn to the second case which is one of a different sort. He is 72 years of age, born in England and a cloth-finisher by occupation. He never had rheumatism before the present attack. His general health was good until eight months ago when he was attacked with pain in the joints, the knees being specially affected. In both of these cases, you will observe, as is usual in rheumatism that the large joints were affected. There was very little fever and in three or four days, the joints began to swell and this gradually grew worse. He says that while he was sick, he had good care, but the condition of the joints did not improve. The disease at first affected a number of joints, but it soon left all but the knees. This man without any rheumatic diathesis, was not in good health at the time of the attack and being attacked with rheumatism, he remained in his bed under treatment but the disease did not yield but ended in a chronic arthritis. Unless this is the result of inadequate treatment in the early stage, it is the result of defective vitality. It illustrates strongly the tendency which rheumatism has in cases where the constitution is not strong, to run into a chronic form and to settle in a few of the joints which were most affected. It is rare that the chronic disease affects all the joints which were first involved. More commonly, it will leave most of the joints; one or two joints only, and usually the larger ones as the ankle, elbow, knee or as here, both knees will remain inflamed and pass into the chronic form. We have here a case of rheumatic arthritis, attended with swelling, thickening and effusion, both

around and into the joint, alteration of the synovial membrane, stretching of the capsule, pain on handling, pain on motion, crippling of the limb, enforced disuse of the limb and wasting of the muscles of the part. Such are the ordinary results of chronic rheumatic arthritis. In addition, the pain and enforced rest, interferes with repose and causes depression of the general health.

Chronic rheumatic arthritis furnishes one of the most fruitful subjects for thought and one of the most difficult subjects for treatment. Here again it is necessary to take into careful consideration the state of the system as quite apart from the state of the joint. I know of no condition in which the treatment is more unsatisfactory. If you simply fix the attention on the local lesion and prescribe one after another the remedies recommended as good for chronic rheumatic arthritis; you will ring the changes upon the Pharmacopœia, while very often the patient steadily progresses backward. There are many cases of this kind in which the general system is so enfeebled, the digestion so impaired, the circulation so defective and the functional activities so disturbed, that the joint affection becomes a matter of absolutely no consequence whatever. In such a case, the treatment must be directed to the improvement of the general health and as this improves, the symptoms of the joint trouble will also improve. While, as long as you hammer away with iodide of potassium, colchicum and guaiacum, one after another, you will find that the joint affection gets worse, the patient goes down hill and the treatment is entirely negative in its results. Cases of this kind will often come under your care which have been bedrugged to the last degree and where you have to begin by cutting off all remedies especially directed to the local lesion. When this old man came under our care after an illness of eight months, he was in such a condition of depressed vitality, impaired digestion and enfeebled circulation, that we begin the treatment by trying to build him up. We have employed with him one of the most useful agencies in the treatment of chronic rheumatism, that is the use of daily massage, to supply some of the good results of exercise and to stimulate the circulation and activity of the skin. I often conjoin with massage the inunction of oil. In many of these cases I use daily manipulation and

friction of the surface followed by rubbing into the skin some vegetable oil as sweet oil flavored with bay rum or cologne, or cocoa oil which is a very nice application. Once or twice a week the patient is briskly sponged with hot spirit and water or hot salt water, cleansing the skin of the dead epiderm, removing the oil and opening the pores. This is followed by the friction and the inunction with oil. I have seen remarkable results from systematic massage in chronic rheumatic arthritis and it is an influence which I never fail to invoke where the patient is unable to take voluntary exercise. If the patient is able to take exercise with crutches, a wheeled chair or a velocipede the manipulations may be limited to the affected part, but where, as in the present instance the patient is bedridden, the massage should be general and the whole surface should be rubbed and if the digestion and circulation are poor, oil should be rubbed into the skin.

The best remedies in a case of this kind are those directed to improving the general condition, as pepsin, muriatic acid, nitro-muriatic acid, quinia, strychnia, cod-liver oil, preparations of iron and the like; in other words remedies directed to the depraved vitality without reference to the special rheumatic trouble. It is not until the patient's system has been built up and the nutrition and digestion are in good condition, that you can resort to the use of the alterative remedies, before mentioned. This man's condition is so much improved that I shall begin the use of iodide of potassium, continuing the tonic treatment and massage.

Local treatment is also required. This should consist of passive motion and external applications. Passive motion is very important and this is easily understood, when it is remembered that the patient from pain which the movement causes and the weakness of the limb, has allowed it to remain for a long time in an unnatural position and the effect of this prolonged disuse, is to seriously interfere with the nutrition of the articular surfaces, the healthy state of which depends on the stimulation of movement. This movement may be made by a Stromeier's splint, put on every day and the ankle changed from time to time or it may be done during the process of massage, by the addition of systematic movements. Sometimes, these movements have to be very slight. I have observed that in those cases in which there is considerable effusion into the joint, passive motion is not well borne and has to be very slight and

gradual, and that in those cases in which there is a good deal of external swelling, and false ankylosis with adhesions, motion is most valuable and must be carried out persistingly, thoroughly and perseveringly. In this patient, I should use it by altering the angle at the knee several times a day.

Alternating with motion, uniform pressure must be employed. One of the best modes of using this is by the plaster bandage which should be split so as to be sprung off when the joint is to be moved. If this is not done, an ordinary bandage may be employed, or pressure may be made by an elastic cap or the elastic bandage.

In addition to pressure and motion, counter-irritation must be employed. The extent to which they are to be used will depend upon the amount of exudation around or effusion within the joint. Where there is considerable effusion into the synovial sac as here, I prefer the use of blisters to any other application. I shall order for this patient a blister two inches square, repeated at intervals of seven days, alternating from one knee to the other. Where there is a good deal of thickening around the joint, I use the prot- or biniodide of mercury. When the thickening is deep-seated, I am fond of light touches with the actual cautery applied at intervals of ten to twenty days. The pain of the application may be lessened by first freeing the part.

By such treatment as this perseveringly carried out, the most obstinate cases of chronic rheumatic arthritis, will yield and give most brilliant results and patients who have been crippled for years will be restored to comparative health and comfort.



TREATMENT OF GONORRHOEAL RHEUMATISM.

Dr. Herschell states (*Lancet*, August 18, 1883) that he treats rheumatism, whether due to gonorrhœa, by fluid extract of *Manaca* (*Fransiseea uniflora*) in five-minim doses every three hours, with results in most cases equal to those obtained by salicylate of soda. In some instances, *Manaca* succeeded when the salicylate had failed.—*Arthur Cooper in London Medical Record.*

SELECTED PAPERS.

A LECTURE ON ACUTE MENINGITIS.

By WILLIAM T. PLANT, M.D.

Gentlemen:—Our topic for to-day is acute meningitis, one of the most formidable of all the diseases of early life. You will find it described in some of your books under the name of acute hydrocephalus; but, while you may find it useful to remember that fact, I hope you will not use that term. It served a good purpose once, but, now that we have a better knowledge of the disease, it should give place to the more appropriate name of meningitis.

We recognize two varieties—the tubercular and the simple. The former being much the more frequent in children, merits our first attention. Acute tubercular meningitis is an inflammation preceded and caused by a deposit of tubercle within the skull. Examination made after death reveals the tubercles, not aggregated into masses, as they so often are in the lungs and other organs of the adult, but as minute, grayish bodies of pin-head size, sometimes larger and often smaller. They may be very numerous or so few and sparse as to be found with difficulty. The severity and duration of the illness seem to bear little relation to their numbers.

You might fairly suppose from the name, *meningitis*, that all the membranes, dura mater, arachnoid and pia mater, share alike in the tubercular deposit and the resulting inflammation; but it is not so. With few exceptions, if any, the granulations are in and here the brunt of the inflammation expends itself. Nor do the tubercles spread themselves over the whole extent of this membrane. Search for them ever so carefully on the convexity of the hemispheres, and you will rarely find them; but lift the brain from its bed and examine its base, and you are at once rewarded. Here, between the optic commissure and the medulla oblongata, you may find the tubercular granulations in more or less profusion. Usually some may be found along the lower part of the sides of the hemispheres, as also in the processes of pia mater that dip down into the sulci between the convolutions. The membrane is often found thickened by an opaque, grayish infiltration that has been regarded as “confluent tubercle.”

Besides the tubercles and infiltration, you will find some of the concomitants and results of the inflammation, as hyperæmia of the

membrane and contiguous parts, flakes of lymph, and often serum and pus. Almost always there is adhesion, so that when the pia mater is peeled off it brings some of the brain substance with it. The inflammation may have invaded to some extent the brain itself, which will then present changes in color and in texture. It is common to find the fluid in the lateral ventricles somewhat augmented; occasionally the increase amounts to a quarter of a pint or more.

Quite generally, but not always, meningeal tubercle is associated with tubercle in other parts of the body, notably the peritoneum and the lungs.

Whatever may contribute to produce a tubercular diathesis in a child may become a cause of this disease. Heredity is a chief cause. The offspring of consumptive and scrofulous parents are specially liable to it. Impure and confined air, want of healthful exercise, and insufficient food and clothes, are powerful contributory causes. The recession of moist cutaneous eruptions is thought by some to be a cause. I have no doubt that there is some connection between the disappearance of such eruptions, especially if about the head, and this disorder. It is frequently secondary to other diseases, especially to measles and whooping cough.

Symptoms.—Dr. Robert Whytt, of Edinburgh, whose admirable description of this disease was first published in 1768, two years after his death, divided it into stages, and his example has been generally followed by other writers. Not that there are distinct stages with sharply defined boundary lines; you are not to look for that, but rather for a gradual change and succession of symptoms answering to the progressive character of the malady.

With this understanding, we will follow the usual course and consider, first, a stage of invasion. From the standpoint of diagnosis and treatment, professional interest centers in this stage. He is a skillful diagnostician who, in the half-revealed and inconstant phenomena of the first days, can unerringly recognize the foe he has to meet. It is only at this time, too, that there is any hope at all of success from medical treatment.

You are called, then, to see a child between one and seven or eight years old, for this malady, like many others, is infrequent during the first year, and after the eighth or tenth the liability is greater to pulmonary phthisis than to meningitis. Perhaps the parents may have noticed that for some weeks, or even months, the

child has been losing weight and color and spirit; that it has been easily fatigued and easily fretted; that it has been, for a child, too much inclined to silence and sadness; that it has been sleepy by day and restless by night. Frequently, however, these prodromous symptoms, if present at all, have not been sufficiently pronounced to attract notice.

The little patient does not seem to you to be very ill, but it has lost its usual animation and sprightliness, and it no longer finds pleasure in its toys. If old enough, it may complain of headache; if not so old, it may manifest its discomfort by carrying its hand to its head. It is apt to reel in walking, and it may be observed sometime to come to a sudden pause and look about as if bewildered or surprised. When lying down it may cry out that it is falling, and beg to be taken up. These phenomena are doubtless due to vertigo. It inclines to drowsiness, and when disturbed, is petulant and spiteful. When questioned, it replies in monosyllables, if, indeed, it replies at all. Its very silence is ominous of the coming storm. It prefers darkness, or rather twilight, to light and instinctively closes its eyes and turns its face away when brought before a lamp or window. The eyes are unnaturally lustrous, and the pupils, even thus early, are apt to be contracted. The hearing is often morbidly acute, and loud noises are distressing. At night the sleep is fitful and disturbed. Grinding of the teeth is frequent from spasm of the masseter muscles. Twitching of other muscles is common and there may even be general spasms. Indeed, at any period of the disease there is a liability to general convulsions, and occasionally they occur at the onset. The temperature is somewhat raised, but is probably not above 101° . Very likely the pulse is a little accelerated, though it is slackened even thus early.

Constipation is an early symptom, and usually attends the whole course of the disease, excepting, it may be, the very last days. In a few instances there has been diarrhœa at the beginning, but of short duration, and followed by abiding costiveness.

Another early and important symptom is vomiting. Often it is one of the first things noticed, and the child is thought to have a disordered stomach. It is repeated several times, in most cases during the first few days, and is sometimes so urgent as to interfere with nutrition. Raising the child from the recumbent posture frequently excites it. I would have you make note of the fact that

vomiting is not present in every case, as has been asserted by some writers. I have known of several instances in which it was altogether absent. Barrier found it absent in about a fifth of the cases observed by him. It does not usually attend the latter part of the disease, and frequently disappears after two or three days.

Though the general temperature is somewhat raised, the face is commonly paler than natural, excepting now and then when a transient redness steals over it. Such are the ordinary phenomena of invasion. Not all of them are present in every case, and no one of them is specially characteristic. It is only through assiduous watching of the patient and weighing all the symptoms that you can arrive at any early diagnosis. The mistake is often made of pronouncing a commencing meningitis remittent or typhoid fever. Again and again I have committed this error, though resolving each time to be more wary in the future. The ophthalmoscope is sometimes employed for the early detection of the disease. When retinal congestion and miliary granulations within the eye can be demonstrated, all doubt is removed. But some cases of meningitis are unattended by retinal changes, and then this test is valueless.

But by the fifth or sixth day, if not sooner, the symptoms become so pronounced and characteristic as to compel a reluctant revision and correction of the diagnosis, if we have previously been mistaken. The inflammation, now fully developed, progresses rapidly. The headache increases. Children who are old enough often cry out, "My head, my head!" Why the pain should often be referred to the top of the head and the forehead, when the inflammation is mainly at the base, I do not know. In some instances the ear, the back of the neck, or curiously enough, even the abdomen, is the seat of excruciating pain.

Characteristic symptoms of this middle period are found in the pulse and respiration. Slowness and variability distinguish the pulse. A decline of twenty or thirty or more beats is not unusual, but it does not remain constant to any figure, being slower at one time and faster at another. It is also irregular as to rhythm and strength. In many cases there is a lapse of every fourth, or sixth, or eighth beat. It is affected by slightest causes, and a trifling movement or excitement will surprisingly increase its rate. The slowing of the pulse is not, I believe, present in every case; but variability and more or less irregularity are, so far as I know, constant symptoms at this period.

Irregularity and inconstancy also mark the breathing during this middle stage of meningitis. One moment the inspirations may be equal and natural; at another they may cease altogether, and that for so long as to excite fears of a permanent suspension of the function. This will be followed, perhaps, by a hurried gasping, as if to atone for time lost. Occasionally there is a deep and prolonged inspiration—a sigh. Yawning is likewise a frequent symptom. These peculiarities of pulse and respirations are doubtless due to the fact that the roots of the pneumogastric nerves are involved in the morbid processes.

The general surface of the body is pale—so pale frequently that it looks like white marble, while upon the cheeks and forehead, and perhaps the ears, appear, at irregular intervals, bright red and distinctly circumscribed spots of congestion. These spots upon the cheeks approach the circular in form, and are from an inch to an inch and a half across. They come and go in a wholly uncertain way.

Sometimes fugitive streaks of redness flit across the pale face as fleecy clouds move over the face of the clear moon.

These spots of congestion are in striking contrast to the general pallor of the features, and contribute to give to some infants, while lying quietly in a stupor, a look of health not only, but of great beauty.

When awake, the child is oblivious as to its surroundings. At one time there may be a steady, fixed gaze into vacancy, and a well-guarded silence, giving place, when disturbed, to a spiteful look and a petulant cry; at another time there may be an active, garrulous delirium.

By degrees the eyes assume appearances that signal the work of destruction going on within the skull. One of these is a permanent squint affecting one or both. When in a stupor, the balls, turned upward under the drooping lids, may be seen to move with feeble oscillations. From time to time the lids lift and quickly fall again. The pupils, contracted at first, are now dilated, probably unequally so.

In many cases the extremities are very cold, while the extreme heat of the head is made evident to the hand, but these are not constant symptoms.

There is a curious and unexplained symptom mentioned by most

writers; that is, retraction of the abdomen. The bowels seem to retire toward the back bone, making a deep, tray-like excavation, above which the iliac and pubic bones and the cartilages of the ribs rise up like promontories. This condition is spoken of as the "boat-shaped abdomen." It is said to be present at some time in almost every case, and may appear early or late in the disease. If there is coëxistent tubercular peritonitis, it will, of course, be absent.

During this middle period of the disease many children utter at frequent intervals a solitary, sudden cry, half scream and half squeal, of "hydrocephalic cry." Meningitic cry would be a better term.

Jerking of muscles, before alluded to as a frequent feature of the invasive stage, becomes more marked in this. Through it, counting of the pulse may be interfered with, and the face may be thrown into momentary grimaces. Tremors run through the frame, and tonic contractions cause rigidity of certain parts. Sometimes the head is drawn and held back, but to a moderate degree only, by stiffness of the nuchal muscles.

Gradually the increasing stupor merges into coma, paralyses of various part supervene, and we pass, by insensible degrees, into the third and closing stage. General and special sensibility are now abolished, and the child cannot be roused from its lethargy. The strabismus continues and eye-balls become hazy, because no longer kept moist by winking. The pupils become more dilated, and entirely unresponsive to light.

Flakes of lymph collect on the margins of the lids and at the inner angle of the eye, requiring frequent removal.

The pulse, but lately so slow and halting, is now bounding along at a reckless, but more regular and equal pace, making often in the last days from 150 to 200 strokes a minute.

The breathing, too, like the pulse, but later, becomes rapid and more regular. Toward the end it is apt to become very noisy from tracheal and bronchial râles. Convulsive and automatic movements continue in parts that are not paralyzed. Chewing and sucking, and up and down movements of a leg or an arm, are common. The sphincters of the bladder and rectum becoming paralyzed, the urine dribbles away, and an offensive looseness follows the constipation of the early periods. Hemiplegia sometimes occurs; I have known one leg and arm to lie motionless for some days before death. General convulsions are imminent, and may bring the sad scene to a sudden

close. But in most instances death lingers. The coma and insensibility become absolute; the pulse disappears; respiration becomes more labored and noisy; a copious sweat stands upon the surface; the lividity deepens, and after several days of watching for the end, the child dies quietly. Authors assert that there is occasionally an unexpected waking from profound coma, when the little one recognizes its friends, and even handles its toys, but only to fall back, after a few hours at most, into a lethal sleep.

The ordinary duration of tubercular meningitis is between one and three weeks, but it may be so violent as to destroy life in two or three days, or so mild as to continue for many weeks.

The prognosis is the gravest possible. So few cases of recovery have been put on record that those have been considered by many as open to a suspicion of mistakes in diagnosis. It is true that trivial disorders of digestion do in some children create symptoms that simulate pretty closely those of meningitis, and that the cerebral and nervous phenomena of typhoid fever and pneumouia have often led practitioners into error. But the probability that attacks of real tubercular meningitis have been recovered from is strengthened by the fact that in quite a number of instances the children have subsequently succumbed to this disease or to phthisis pulmonalis. If we count all the reported recoveries as genuine, the showing, after all, is but a sorry one. After the middle period, I think you will never be mistaken in prophesying a fatal ending.

A few words as to the *simple* or *non-tubercular* form. It is, as I before intimated, rare as compared with the other. It is as frequent in adults as in children, and as it will be fully treated of from the chair of practice, I shall give but little space to it. It is less regular in its course than the tubercular form, and is frequently more rapid and violent. When it occurs from injury to the head, or from the extension of inflammation from other structures, as the ear, there may be almost at once convulsions and other symptoms of the fully developed disorder, and in three or four days, or even less, it may have run its fatal course.

The inflammation is apt to be more diffused than in the other form, and after death the convexities of the hemispheres and their inner surfaces are usually found overlaid with pus and fibrinous membrane. Associated with spinal meningitis, it sometimes occurs epidemically, attacking large numbers of persons of all ages and conditions.

While the mortality of *simple* meningitis is very large, the prognosis is less certain than in the other form, since mild cases do occasionally end in recovery.

Treatment.—We now come to the discouraging matter of treatment. Everything has been tried with pretty uniform unsuccess. Up to a recent date the methods pursued with tubercular meningitis were not only heroic, they were torturing. Bleeding, local and general; large blisters or croton oil to the shaven scalp, and calomel, frequently in enormous doses—these were the agents employed to overcome and expel the demon. But they never did it, and most of the profession now advocate more humane if not more successful procedures. If you are so clever as to recognize the disease at its invasion, there is a little hope. The child should be kept quiet in a darkened room, and spared all occasion of annoyance and fretfulness. The diet should be as nutritious as the patient will take. Milk, cream, and meat broths are best. A hot foot-bath fortified with mustard lessens the cerebral congestion and soothes the child. I would use it as many as four or five times in the twenty-four hours. Keep the feet and legs warm by bottles of hot water, or other means.

Both reason and experience favor cold applications to the head. If there is a heavy growth of hair, it should be thinned, and cloths, not too thick, wrung from iced water and changed often so as to make constant impression of cold, may be laid upon the head. When there is intense heat of head, bladders of pounded ice may be applied. This is a powerfully depressing measure, and should not, I think, be used in infants or weakly children. When employed, some layers of cloth should come between the ice and the scalp.

Correct constipation by any agreeable laxative, but be chary of much physic, for the chance of success is not made better, but rather the worse, by hypercatharsis.

About the only drug that seems to have anything in its favor as making for recovery is iodide of potassium. Roeser suggested it in 1840. It has been extensively used since with occasional benefit, or apparently so. Quite a number of cases of recovery under it, but discouragingly few as compared with the whole number of cases, have been reported from entirely trustworthy sources. It should be early and continuously given in doses of from .12 to .3 grammes—

2 to 5 grains. To relieve the headache and ward off convulsions, bromide of potassium is our best remedy. When there are extreme restlessness and discomfort, you will find it of service to combine chloral and bromide. Ordinary doses will often fail of appreciable effect. Give them boldly until your purpose in giving them is effected. Valerian, in fluid extract or other form, tends to quiet the muscular twitching and the general restlessness. In most cases it is better to dispense with opiates, since they increase cerebral fulness, constipation, and the growing tendency to stupor. But in certain cases the agony is so great that they may, and should, be freely used, even hypodermically.

By the early and persistent employment of such means as these you may possibly save your patient, and then, in your surprise, you will ask yourself whether, after all, your diagnosis was not erroneous.

The prophylactic treatment of tubercular meningitis promises more than the direct. To prevent so terrific a malady is better than to cure it, even if we could cure it. A child with inherited tuberculous or scrofulous tendencies should be well looked after, especially if it begins to exhibit those vague but growing evidences of poorliness that are so often precursory to this affection. Cod-liver oil should be given, a half-teaspoonful or more t. i. d. The diet should be nutritious—the best can be digested. Stimulants are in order—bourbon or brandy with milk. Mild exercises out of doors, that interest and amuse without fatiguing, should be provided. Change of air and scene is often of signal service. If there are moist eruptions about the head and face, I would not attempt to dry them by local applications, but rather trust them to disappear with the improvement in the general conditions.—*N. Y. Med. Jour.*

ON THE TREATMENT OF HAY FEVER AND ALLIED DISORDERS.

In a very valuable paper on this subject in *The American Journal of the Med. Sciences* for January, 1884, Dr. Harrison Allen claims that the means of effecting the cure of this hitherto considered incurable disease is simply to overcome the tendency to obstruction in the nasal chambers.

The symptoms of hay fever are always associated with some degree of obstruction of one or both nasal chambers. A cause of this obstruction is dilatation of the bloodvessels. There is no doubt that the local phenomena are in most instances the same, and that the multiform related symptoms, such as injection of the eye, headache, malaise, asthma, &c., are due to reflex vaso-motor disturbances. But many patients report for treatment who exhibit swelling of the nasal mucous membrane, occlusion of the respiratory passages, and mucoid or semi-purulent discharge, without any of the related reflex phenomena. Yet a third and intermediate group exhibit perhaps a tendency to turgescence of the mucous membrane, together with one or more of the more common constitutional symptoms of typical hay fever. Indeed, there is nothing peculiar to the disease just named save its sharply defined periodicity, particularly in that phase of it where the periods of recurrence happen to coincide with the time of fruitage of certain crops. In a small group of cases, where, in addition, other signs and symptoms become prominent which would invalidate the above proposition, Dr. Allen is inclined to attribute them to mental impression,—in some of the varied phases of hysterical or neurotic excitement.

Or the case may be stated in different language, as follows: In an imperfectly defined group of cases of nasal catarrh, a sensation of sudden, obstruction of one or both nasal chambers is a conspicuous symptom. This sensation is accompanied by a constant change in the chambers themselves, viz., engorgement of the membranes over the turbinated ones, producing pressure against the septum and occlusion of the respiratory passages of the nose. The sensations are recurrent, but vary greatly as to the time of the day or the season of their return. With some patients they are nocturnal, and are associated with the recumbent position; with others they occur after meals only; with some they occur in the summer season; with others yet again, in the winter. The sensations may be confined to either chamber, or be present in both. In aggravated cases they are associated with numerous reflex symptoms, among which may be mentioned lachrymation and hyperæsthesia of the conjunctiva, headache, and asthma. Patients having a disposition to obstruction during the summer and autumn report themselves as suffering from "hay fever;" while those having alternating attacks in the right and the left chambers report with "nasal catarrh."

The cases so far studied exhibit one feature in common, viz., that the inferior turbinated bones lie well above the plane of the floor of the nasal vestibule. In many persons not the subject of "hay-fever" and allied disorders, the lower free portion, including, of course, the inferior border of the bone, lies below the plane of the floor of the nasal vestibule; and in ordinary inspection the interior meatus is out of sight.

It will thus be seen that the mucous membrane, which is known to be the most erectile, is also the most exposed to irritation from extraneous substances, and to changes in the temperature of the surrounding air.

The conclusions to be drawn from the study of the six cases reported by Dr. Allen may be summarized briefly as follows:

I. That the treatment of all conditions of obstructions in the nasal chambers, no matter from what cause arising, can be successfully carried out by destroying the causes of obstruction. If the cause be an overgrowth or bone-tissue, it must be filed, sawed, or drilled away. If it be caused by a deviated cartilaginous portion of the septum, such portion must be re-set in a new place. If, as is often the case, it is due to periodic turgescence of the mucous membrane or the resulting secondary hypertrophies, such growths must be destroyed, either by the galvano-cautery, by the snare, or by caustic acids.

II. That the treatment of hay-fever and allied periodically recurring during nasal affections in no way differs from the treatment of other nasal diseases accompanied by obstruction, and that the treatment may be conducted during an attack as well as in the intervals between any two attacks.



OSTEOTOMY FOR BOW-LEGS.


Dr. W. H. Carmalt reports in *The American Journal of the Medical Sciences* for January, 1884, a case of a child of five years, in which there was marked outward curvature of the tibiæ and fibulæ of both legs, and in which he divided the bones, under antiseptic precautions, with excellent result.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

WHAT IS THE NATURE OF THE MASSES DISCHARGED FROM THE BOWEL BY LARGE DOSES OF OLIVE OIL?

The nature of the bodies discharged from the bowels in cases of suspected calculi in the gall bladder, after the administration of olive oil, is little understood. Flint says (*Practice Medicine*, p. 525, Fifth Edition) referring to them, they "are composed of a concrete form of fatty matter like the bodies passed in some cases of fatty diarrhœa," and we infer that Dr. Flint does not believe that the masses of bodies so discharged are biliary calculi. He is not alone in this opinion, for we believe it is concurred in by many practitioners.

A recent opportunity to examine chemically a mass of discharged bodies enables us to say something respecting their composition. A patient who may under treatment for hydroperitoneum, discharged, after taking one grain of elaterium, three or four objects by the bowel from the size of a small plum to a cherry stone. They were so easily discernible in the clear fluid discharged, that the patient examined them as a matter of curiosity, and enquired of his physician

what it meant. His description was clear, taken in connection of the history of the case, to lead to a suspicion of the presence of gall-stones. A full dose of sweet oil brought away about one ounce and a half of bodies of various shapes and sizes. Some were the color of greenish myrtle wax, brown, and others nearly white. They were of the consistency of wax, soluble in alcohol and in olive oil, and inflammable. The particles were covered with adherent oil, and in a few days melted down into a semi-fluid mass.

Moistened with nitric acid, a bright red reaction (cholesterin) resulted upon the addition of a few drops or ammonia. Dissolved in ether and evaporated, white crystals resulted, with a few drops of olive oil, which had been dissolved by the ether, floating on the surface.

The melted mass was sent to the Curator of the Army Medical Museum, and kindly examined by the chemist. He found by analysis that there was altered cholesterine and cholesterine intact. The quantity was not stated.

There is no doubt in the mind of the writer, that the chief constituent of the bodies in question was cholesterine. Assuming that there is no doubt as to the chemical examination, the question arises, Does the large amount of cholesterine indicate that the bodies are biliary calculi or enteroliths? And another question arises, Will not large doses of olive oil bring the same masses away from any one, independent of the fact that the patient has been seized with biliary colic and therefore suspected to have biliary calculi?

If these bodies are not biliary calculi, or enteroliths, (which latter are generally believed to be calculi escaped from the gall-bladder) what can they be? The presence of almost pure cholesterine is not known to exist in any other discharges from the bowels, except the two bodies above mentioned.

It would be easy enough to believe that any person could discharge masses of bodies similar to those in question, if it were not for the presence of such an amount of cholesterine. In olive oil there is hardly more than a trace, and if there is any combination in the intestinal canal between olive oil and any other substance to form cholesterine, it is not yet known to chemical science.

We trust to be able to make a more complete investigation, but as far as we have gone, we are sure that masses of cholesterine are expelled from the bowel by olive oil, and that they are soluble in this medium. We are not prepared to say anything as to the identity of these masses with biliary calculi, but leave that to future observation.

IS VACCINIA MODIFIED VARIOLA?

Our esteemed contemporary, the Louisville *Medical News*, under the above caption, discusses an editorial from the *British Medical Journal*, December 22d, on the subject of transmutation of variola as practiced by Dr. Voigt.

Our readers will remember that we gave Voigt's remarkable paper in the JOURNAL, 1882 without comment. Since that time his contribution has quietly taken its place as a proved proposition, just like so many other subjects which are not easy to analyze because of the difficulty of repeating the experiments upon which they are based, and the profession finds it easier to accept than to attempt to disprove it.

The *Medical News* raises the pertinent question, "why, if variola, and vaccinia are only different degrees of one and the same disease, should the latter protect its subject against the former and itself during a period of twelve years, while the former, after that time, fails to protect against the latter, but does guard its subject against its own recurrence?" We venture also to touch upon some points not raised by the *News*.

It is easy enough in England to fall in with Voigt's views of the transmutation of variola in vaccine by the process of inoculating cows with small-pox lymph, because the influence of Ceely's experiments far more lucid than Voigt's, has dominated the medical mind, with but the few exceptions of such men as Dr. George Gregory, and Mr. Fleming, since Jenner's day. Ceely's inoculations and studies went far to demonstrate what had only been a theory in the mind of Jenner, and so the conservative element in Great Britain could welcome a corroboration of the theories of Jenner and Ceely, without the slightest doubt. Therefore it is not surprising that we find the *British Medical Journal* committed to Voigt's views. If the statements made throughout the editorial of the latter journal, are as carelessly written as the one we will presently point out, we must write "not proven" against the entire argument.

The editor says that "Dr. Martin, of Boston, a strong advocate of animal vaccination, on trying to repeat the experiments of Ceely, set up an epidemic of small-pox," etc. In this he has confounded two very different men. The Dr. Martin to whom he refers as having made a serious blunder in using what he supposed to be

transmuted variola, was Dr. J. C. Martin, and in no way related to the eminent vaccinologist, Dr. Henry A. Martin. The last named gentleman had never undertaken to imitate the experiments of Ceely, without he did so within a few months past. This annoying error of confounding the two names seems to be exceedingly difficult to set straight, but it is so manifestly unjust to Dr. H. A. Martin that it needs to be restated that he has never committed blunders as an inoculator, but that he has spent many years of active investigation of vaccination in all its bearings, and as far as the practice in the United States is concerned, he has succeeded, by the introduction of Beaugency virus, in bringing vaccination back to its original Jennerian purity. All the text book repeat Dr. J. C. Martin's experiments as a proof of the correctness of the doctrine of transmutation; it may be omitted in some recent editions we have not seen, so that there is some ground for the reiteration of the double blunder.

Further, the comments on Voigt's experiments for the purpose of the transmutation of variola into vaccinia by successive inoculations, leave out of consideration one important matter, which must serve at present to invalidate his results, in some degree, as it has brought into question the far more satisfactory experiments of Ceely.

Both Ceely and Voigt start out practically with the preconceived belief in the Jennerian theory of the identity of variola and vaccinia. Lest this statement may seem too rash we will make a quotation from Voigt's paper. (*Deutsche Vierteljahrschrift für öffentliche Gesundheitspflege*, 1882, p. 292).

"If variola and vaccine are inoculated simultaneously upon the same subject, the two germs of infection do not disturb one another, they both develop according to their kind. This is a fact generally recognized by Chauveau. (*Vaccine et Variole*, p. 65). Therefore, I could use for the inoculation of variola, a calf that was serving for the production of animal vaccine for the public, if I only chose for the seat of inoculation of the fresh virus, a point sufficiently distant to avoid with certainty the mixing of the two kinds of lymph."

Further on in the same paper Voigt says:

"I have always raised simultaneously both sorts of lymph upon the same calves, naturally with the necessary precautions against an intermixture. In this the old vaccine seemed to me to be gaining in

energy and freshness, as though it were excited by the powerful lymph of variola in its neighborhood, which on its part seems to approach, very slowly, it is true, the milder forms of the old stock." In Ceely's experiments as recorded in the "*Trans. Prov. Med. and Surg. Jour.*," Vol. viii. p. 382, it is likewise distinctly stated that the variolous inoculation was a failure on the ninth day, and he "therefore *vaccinated* the animal on the *right side* of the vulva," (the variolous inoculation being on the opposite side). Finally, "but *one* (of the variolated punctures) near the margin of the vulva has assumed the form and appearance of the vaccine vesicle." And so with succeeding experiments, at some stage of the inoculation, vaccination was also employed either upon the principle of Bryce's test, or to vivify the inactive variolous inoculation.

In the light of the numerous careful culture experiments, can such results as those obtained by Ceely and Voigt be considered satisfactory? Are they pure cultures? Is it not begging the question, to have to save a failing inoculation from variolous matter by recourse to inoculation by another substance sufficiently unlike to go by a different name; then to assume them to be alike, and that upon the very ground where the crucial test is being made? Does not the whole question of the transmutation of variola by inoculation upon the cow, judging by the well-known instances cited, lack that rigid conformity to exactness which we now demand in culture experiments in other directions?

With all Dr. Voigt's circumstantial relation of his cases, he fails to prove the identity of the lymph he now claims to be pure vaccine. Its genealogy is badly mixed, and time can only prove that it is an improvement on the Beaugency stock, as he claims.

We can not help, with our present knowledge of the subject, of sharing the doubts of the best vaccinologists, as to the advisability of relying upon variolation as a source of vaccine, or of resting my faith in the identity of the two diseases upon experiments so far performed.

A WORD TO OLD FRIENDS AND NEW.

With this number the JOURNAL commences its seventh year. The new year is begun with as favorable indications for the work in our special field as heretofore. We entered the field when the project of a medical journal in North Carolina had been reported upon adversely at the Fayetteville meeting of the Medical Society. In the face of such a decision, to make an attempt which involved the outlay of money, and a great deal of close application in a direction in which both of the Editors had had little experience, we now revert to with some pride.

We have been obliged from the outstart to do an immense amount of drudgery, unknown perhaps to but few medical journals in the land, and we see nothing before us but unremitting labor. It remains now for our friends to continue their interest in our work. Because from small beginnings we established a work recognized as good by numerous readers and generous advertising patrons, it is none the less true that we have a plant under our care that will only continue to bear fruit as long as it is faithfully cultivated. We are not too modest to ask that our old friends will bring us new friends, and that the old and new will lighten our burdens by giving us a more generous support.

PARKE'S HYGIENE. VOLUME II.

Messrs. Wm. Wood & Co., have given us a second and concluding volume of this indispensable work on hygiene, to which has been added 140 pages of American Appendix by Mr. Frederick N. Owen, C.E. and S.E. Upon the whole the series of Wood's Library for 1883 is the best of all. Parke's Hygiene and Tidy's Medical Jurisprudence alone, being worth half the price of the whole.

We have already had occasion to call the attention of our readers to the esteem in which Parke's Hygiene is held. No one should think of entering upon sanitary studies, without making themselves familiar with this volume, as a foundation for all their work. The maturest papers by the oldest sanitarians abound in references to this author.

REVIEWS AND BOOK NOTICES.

TRAITÉ DE LA VACCINE ET DE LA VACCINATION HUMAINE ET ANIMALE PAR LE DR. WARLOMONT. Paris: J. B. Baillière et Fils. 1883. Pp. 384.

The name of the author has been associated with the practice of animal vaccination for the past eighteen years, and a book by him on the subject of vaccination must attract an unusual amount of attention from every one at all interested in the subject. More especially, in this country where the practice of animal vaccination has prevailed quite exclusively for a number of years, will the chapters relating to the details of the management on inoculation of animals be read with attention.

Dr. Warlomont reminds us that no didactic work has appeared in the French language, on the subject of vaccination, since Bousquet's *Nouveau traité de la Vaccine*, a remarkable fact when we compare the fecundity of authors in other directions, but not so remarkable when we bear in mind the completeness of that celebrated volume.

Since that day, France has fallen from her advanced position in the study of vaccination. Her Steinbrenners and Bousquets were the last of the famous galaxy of vaccinologists, and to-day her best students in this department have failed to exert an influence sufficient to put vaccination upon a footing with other European States, while the literature of later days largely consists in discussions on the origin of Cow-pox, so diverse, and unfortunately so intemperate, as to shake the belief of the scientific world. Death has just laid low the strongest upholder of the theory of identity, Prof. De Paul, of Paris.

The first chapter naturally enough treats of variola, its origin, symptoms, and description of the eruption, to which is added a minute description of the structure of the vesicle and pustule. The second chapter continues the subject of variola, discussing at length variolisation by inoculation, and variolisation by general absorption. The author's division of the subject is unique. In addition to ordinary cutaneous inoculation, he gives an account of a method he practiced. He took a young heifer, and made an abundant subcutaneous injection of variolous fluid. In order to prevent direct inoculation, he took care to make an incision previously, and to cauterize the lips of the

wound with nitrate of silver; he then introduced a syringe deeply and discharged the fluid. Four days after, as sometimes happens even when injections of cold water, a small nodosity resulted, which increased until it attained the size of a large chestnut. What was this nodosity? From the fourth day he made a puncture, from which he extracted a little liquid, with which he inoculated another heifer, in order to assure himself that it was not variolous fluid; this inoculation was without effect. At the end of the seventh day he renewed the same attempt; the result was equally negative. He then submitted the first heifer to inoculation with vaccine virus, after the method he had practiced periodically on a great number of animals of this species, adding that for three years he had not encountered a single refractory subject. He felt by reason of his skill a right to conclude that if the vaccine inoculation produced no effect, that the animal had acquired absolute immunity by intra-cellular injection. There was entire absence of vaccine manifestation. While he does not consider the question as fully determined, there is ground to believe that this plan may be resorted to successfully in certain cases.

Dr. Warlomont assents to the application of the word *vaccine* to the attenuated viruses employed by Pasteur, thereby giving tacit endorsement to his theories as though they were proven. We must consider it a grave error, in our present state of knowledge, tending to confuse the proper significance of words, and showing haste to applaud a practice which is not, so far, yielding in the hands of others, results claimed for it by the originator. He then quotes largely from Bouley's *Leçons de pathologie comparée*, &c., the account of Pasteur's inoculation of animals with prophylactic viruses, and the ink is hardly dry before serious refutations founded upon actual experiments in England, places the whole matter in a doubtful light. The origin of vaccine in the hands of the author leads him back to a historical rehearsal of the Jennerian theory of the origin from *grease*, a well-travelled road, but one which can only lead to such conclusions as these: There are two kinds of *grease*, one a local disease, the "scratches"; and another which is correctly denominated horse-pox. From the latter disease vaccinations have been successfully made. The two diseases have no relation to each other, and ignorance of this fact causes all the writers to blunder, who followed Jenner's first statement. Loy first pointed out

the difference in 1802, but it was forgotten and neglected for many years after.

Perhaps on the question of the inoculation of tubercle, in the process of vaccination with animal lymph will be examined in this volume more carefully than usual, because it is a new charge made by the anti-vaccinists, and because Dr. Warlomont's experience has been large enough to enable him to speak with authority.

In the first place he calls our attention to the fact that out of the millions of persons vaccinated during 80 years, both with humanized and animal virus, that there has never been an authentic report, (or any vague charge we might add) of the transmission of tubercle; and it is highly probable that in all these uncounted vaccinations that there were numerous tuberculous vaccinifers. As to the second point—the transmission of tuberculosis from the bovine tribe, Dr. Warlomont says that tuberculous inoculation when intentionally performed can only succeed by a deep-seated insertion,—an incision far deeper than is ever made in the act of vaccination. There is, therefore, no danger in such transmission, and to put the matter further beyond the range of probability, heifers as young as those inoculated by the careful propagators of vaccine in this country, are themselves free from tuberculosis.

There is the usual number of misspelt words in this volume. The well-known name of Wagstaff appearing as Wagstag, and one of the very few English words twisted into "hore-pox." It is a little disappointing to see the author giving so much credence to the crude or incomplete theory of germ-causation of disease, and neglecting to write more fully upon divisions of his subject of which he is supposed to be well informed.

VETERINARY MEDICINE AND SURGERY AND DISEASES AND INJURIES OF THE HORSE. Compiled from Standard and Modern Authorities and Edited by F. O. KIRBY. Illustrated with 4 colored Plates and 168 Wood Engravings.

The introduction of a volume on the diseases of horses into a medical library is a novel idea. We believe it will be received with favor by most physicians, because they are so much interested in their own faithful animals, and are so often called upon for advice about those of their neighbor. The volume is profusely illustrated, and numerous formulæ are interspersed. The posological table on

p. 323 will be especially useful. It is very evident, as a perusal of this book will demonstrate, that the knowledge of the diseases of the noblest of animals is far below the scientific standard it is generally supposed to have attained.

This is the December number of Wood's Library for 1883. The series so far has put within the reach of physicians, at a moderate price, books they could not have afforded otherwise, and doubtless the example of this firm has cheapened medical books generally.

INDEX MEDICUS is under the necessity for calling upon the medical profession for help to enable the publisher to continue it without loss to himself. Many subscribers have guaranteed \$10 a year, and many more are needed. There is only one subscriber in North Carolina besides the State Medical Society, and the publishers would welcome others. It would be a pity for such a unique and valuable periodical to suspend. The publisher intimates that this will be the last year he will undertake such a risk, and the work must either stand or fall on the new basis of this year.

THE ANNALS OF ANATOMY AND SURGERY.—During the absence of Drs. Pilcher and Fowler in Europe this year, the above valuable publication will be suspended. We regret it exceedingly as it has grown to be a necessity. The somewhat indefinite promise of its resumption next year is some comfort, but we are afraid that our friends will hardly be willing to come to such work after they have once got loose from the harness.

THE ARCHIVES OF PEDIATRICS is a new journal started in Jersey City, N. J., under the editorial management of Dr. W. P. Watson, A.M., M.D.

This is the only journal in this country devoted exclusively to the diseases of children, and judging by the appearance of the first number, "it has come to stay."

Subscription price \$3.00 a year.

CURTIS' MANUAL OF GENERAL MEDICINAL TECHNOLOGY is a little manual, which has for its object chiefly the teaching of the art of prescription writing. Strange to say not many doctors write prescriptions correctly even as to the grammar. Many dodge the

whole matter by resorting to abbreviations which would lead to common errors, without the writer is fortunate enough to send them to a druggist who know how to decipher them. Such a manual as this is very necessary, because say what you will, prescription writing is largely neglected until the doctor can no longer avoid it. A thorough acquaintance with Dr. Curtis' work will enable any one to write a correct prescription.



URINARY CHEMISTRY OF DAYS GONE BY.

“A Woman whose Husband has bruised himself, took his water, and away to the Doctor trots she, the Doctor takes the water and shakes it about, How long hath this party been ill (saith he) Sir, saith the woman, He hath been ill these two daies. This is a man's water quoth the Doctor presently this he learned by the word *HE*; then looking on the water he spied blood in it, the man hath a bruise saith. I indeed saith the woman, my Husband, fell down a pair of stairs backwards, then the Doctor knew well enough that what came first to danger must needs be his back and said, The bruise lay there, the woman, she admired at the Doctor's skill and told him that if he could tell her one thing more she would account him the ablest Physitian in Europe; well what was that? How many stairs her husband fel down, this was a hard question, able to puzzle a stronger Brain than Mr. Doctor had, to pumping goes he, and having taken the urinal and given it a shake or two, enquires where about she lived, and knowing well the place, and that the Houses thereabouts were but low built Houses made answer (after another view of the urin for fashion sake) that probably he might fall down seven or eight stairs. Ah, quoth the woman, Now I see you know nothing, my Husband fell down thirty. Thirty! quoth the Doctor, and snatching up the urinal, is here all the water saith he? No saith the woman, I spilt some of it in, look you here quoth Mr. Doctor there were all the other stairs spilt.”—*From the English Physitian Enlarged by Nich. Culpeper, 1655.*

CORRESPONDENCE.

INSANE ASYLUM AT RALEIGH.

To the Editor of the North Carolina Medical Journal:

I am entirely in accord with your views, expressed in your excellent JOURNAL, in regard to the impropriety of including insane *pregnant* women from our asylum.

The reasons influencing the Board of Directors heretofore as well as now, have doubtless been two-fold.

1. The over-crowded condition of the Institution.

2. The want of suitable accommodations in the ill-arranged architecture of the building. The wings are a continuous succession of wards containing about twenty patients each, all the rooms of which open into a common corridor, so that there are none sufficiently secluded for the comfort and safety of lying-in women. With the inconvenient arrangement in our architecture, the mother and infants would be surrounded by a large number of the insane as a whole ward would have to be devoted exclusively to their use.

It would not, however, be impracticable to build an annex if there were an appropriation for that purpose.

Yours, truly,

EUGENE GRISSOM, M.D.,

RALEIGH, January 6th, 1884.

“RAB AND HIS FRIENDS” FOR TWO CENTS.—The man who has been waiting all these years to get “Rab and his Friends” for two cents can now be gratified, as this capital little story is presented to the reading public by John B. Alden, of 18 Vesey Street, N. Y. We do not give this advice to the unappreciative and stingy fellow referred to above, but if there be any of our readers who have not enjoyed this story by Dr. John Brown, of Edinburgh, let him get it and read it at once.

Prof. Brinton will never undertake Bigelow's operation of litholopaxy, unless the bladder has a capacity of at least ten ounces. He regards lithotomy, in all cases, as more thorough.—*The College and Clinical Record.*

CURRENT LITERATURE.

PRACTICAL HINTS ON THE METHOD OF PREPARING POMEGRANITE FOR TAPE-WORM.

Louis Siebold in the *American Journal of Pharmacy*, Jan., 1884 (*Phar. Jour. Trans.* Nov. 17, 1883.) gives some practical hints about the preparation of pomegranate bark (of the root) for administration in tape worm. He thinks that practically, the active principle, (Pelletierin) is excluded because of the difficulty of their isolation, and its proneness to decompose. Furthermore the nauseous astringent taste has been an objection to its employment. He gives a process for making a preparation possessing the full activity of the drug, and free from nauseous taste, and unpleasant effects.

Six ounces of coarsely powdered root-bark are digested three successive times with 48 fluidounces of water at 160° F., previously acidified with a few drops of acetic acid, each time for about twelve hours, during which the mixture should be frequently agitated, and the temperature maintained at or near the point given. The strained infusions, measuring in all 140 fluidounces, are united and gradually mixed with solution of sugar of lead until no further precipitate is formed on testing filtered portions; the whole is then filtered, the slight excess of lead removed from the filtrate by a current of washed sulphurited hydrogen, the mixture warmed for some time to expel the excess of the gas and again filtered, and the perfectly clear liquor evaporated on a water-bath to the consistence of a syrup at a temperature not exceeding 140° F. * * * Finally the small quantity of residue left is mixed with syrup of orange peel sufficient to produce a draught of about 2 fluidounces.

This draught represents the dose of an adult and should be taken at once, first thing in the morning, the patient abstaining from food and keeping quiet for about four hours after administration. A diet of meat and fish, without bread or farinaceous food of any kind, should be observed for the two days preceding the cure, and on the last day no food whatever should be taken after dinner. During this afternoon it is also advisable to clear the bowels by means of a mild purgative; if then the draught be taken at or about two or three o'clock the following morning and sleep again resorted to after its administration, the patient will have done all he can to secure success.

In eight out of nine cases in which the efficacy of this preparation was tested, the entire tape worm was expelled within five hours after swallowing the draught, and in only one case success was not complete. The eight cases comprise those of *Tæniæ solium*, and five *T. mediocanellata*. In one of the latter cases not the slightest care as regards diet was observed, and contrary to all instructions the patient took a heavy supper the night before the administration of the draught, and yet the entire worm was expelled.

The preparation obtained as above has a pleasant fruity flavor and is readily borne by the stomach. The most fastidious patient would take it with out the slightest difficulty.

THE PICRIC ACID AND POTASH TEST FOR SUGAR.

Dr. Geo. Johnson, in a clinical lecture on the "Various Modes of Testing for Sugar in the Urine" (*Br. Med. Jour.*, Jan. 5, 1884,) says of the picric acid and potash test, that the value of the test for both quantitative and qualitative estimation is established. When he announced his discovery he did not know that Brann, a German Chemist had shown twenty years ago that grape sugar when boiled with picric acid and potash, reduces the yellow picric acid to deep red picramic acid, the depth of color depending on the amount of sugar present.

For bed side sugar-testing he carries in addition to powdered picric acid, grain lumps of caustic potash, and a test-tube which is graduated up to four drachms. He puts into the test-tube a small brass measure of picric acid about one-third grain, urine to the half-drachm mark, water then drop in a grain-lump of caustic potash and boil for about thirty seconds.

Dr. Geo. Johnson has been compelled by reason of the unstable character of the resulting picramic acid solution, to imitate it precisely by a permanent color which he employs as a standard in quantitative estimation. He takes liq. ferri perchlor. fort. 3 i; liq. ammon. acet., 3 iv; acic. acet. glacial, 3 iv; aq. dest. ad. $\frac{7}{8}$ ijss. The color of this, he estimated to be equal to a quarter of a grain of grape sugar to the ounce.

[It has been discovered that the presence of quinine and other substances in the urine invalidates this test.—ED.]

KAIRIN: A NEW ANTIPYRETIC.

Kairin was discovered last year by Fischer, of Munich, and a few months ago was introduced into this country as a substitute for quinine. The word itself has been coined, and is used only for the sake of brevity and commercial purposes, the real name of the drug being oxychinoline-methyl hydride. Two other similar compounds, chinoline methyl hydride, or kairolin, and chinolin-ethyl hydride, possesses similar properties; but they are more difficult to prepare and very little is known about them. The hydrochlorate of kairin is a crystalline powder, of a greyish-yellow color, freely soluble in water, and having a saline, bitter disagreeable taste. The dose usually recommended is from a third to half a gramme, at intervals of not more than an hour or an hour and a half; but the difficulty is to induce patients to take it. In the case of old people or weakly persons, the dose should not exceed one grain every alternate hour as it is apt to produce cyanosis and collapse.

Its physiological action has been investigated by Filehne, of Erlangen, who considers that it is likely to form a valuable medicine. It has been given with much success in most febrile diseases. Its action is noticed in about half an hour after the dose is taken, the fall in temperature being often very marked. There is free perspiration, which continues only whilst the temperature is falling; for, as soon as the lowest point has been reached, which occurs after from two to four doses, diaphoresis ceases, and the temperature remains constant. During the sweating, it is said that patients are much relieved, especially if suffering from acute pneumonia. In this disease not only is the temperature reduced, but the pulse is strengthened, and the pleuritic pains disappear. As soon as the treatment is discontinued, the symptoms return as before, the temperature rising to its original height. The following scheme for using kairin has been worked out by Dr. Filehne, but whether any one will feel disposed to follow his directions is doubtful. In the first instance, kairin is administered in separate doses, of a quarter of a gramme each, taken on wafers, plenty of water being drunk with them. It is advisable to commence with doses of half a gramme an hour on the first day, and to give these four times successfully, but not after the temperature has fallen below 100° Fahr. The temperature must be taken every two hours for the first day,

and it would be still better to take it every hour. When the temperature has fallen to about 100° Fahr., only a quarter of a gramme is given hourly, and this is continued until the temperature rises perceptibly, when the former dose of half a gramme should once more be administered. A dose of half a gramme should be given at once should the patient experience the slightest chilliness. Should the half-gramme doses not have the desired effect in four hours, gramme doses should be given two, three, or four times at intervals of an hour. The dose of three-quarters of a gramme, or one gramme per hour, is to be stopped when a temperature of 100° F., is reached, keeping a reserve dose in readiness, which is to be taken when the patient feels chilly. When the temperature again rises the treatment must be recommenced. We are told that, as the system neither get accustomed to the medicine, nor shows any evidence of cumulative action, a careful day's experimentation in the way indicated will suffice, and the dosing thus standardized on the first day may be subsequently adhered to. These directions are undoubtedly very precise, but they are more than that—they are puerile.

Dr. Hallopeau, in a paper recently read before the Paris Hospital Medical Society, confirmed many of the above statements; and expressed an opinion that kairin, in non-poisonous doses, is, in its action, more certain, powerful, and rapid than any other known antipyretic. Dr. Sassetski found it of much value in typhus; and he remarks that the pulse falls with the temperature, and that the excretion of nitrogenous and phosphatic substances is lessened. The urine assumes a green color, which, however, soon disappears when the administration of the drug is discontinued. Gerat, of Paris, finds that it is useful in all febrile diseases, including typhoid fever, acute rheumatism, septicæmia, tuberculosis, and pneumonia.

Professor Riegel is unable to confirm the statements of Filehne and other observers. He disputes the assertion that half-gramme doses will, in every case, reduce the temperature to normal in four hours; and he failed to obtain the desired result with even much larger doses. In no case was any favorable influence of the general symptom noticed. On the contrary—as has been shown by Seifert—it had sometimes a most injurious effect, collapse setting in suddenly, so that stimulants had to be administered freely. He was of opinion that it could be given with safety only to the more robust, since it had a very depressing action on the heart. Paul

Guttman finds that kairin, like other antithermic agents, is incapable of shortening the duration of the disease, or ameliorating the symptoms. Compared with quinine, its action is more rapid, but far less persistent. Its high price, he thinks, must prevent it from coming generally into use.

Such is the present state of the question. It must be admitted that the prospects of kairin are anything but promising. It has been tried in this country, but has as yet found but little favor. It will probably have its day, and then die out, as many remedies of the same class have already done.—*British Med. Journal*.

SALICYLATE OF SODIUM IN PHLEGMASIA ALBA DOLENS.

M. Viga states that he has attended four cases of this affection. In the first he used no internal remedies, limiting himself to the local measures advised by various authors, keeping the patient in bed two months, and even then a certain degree of œdema remained, with a few nosodities on the course of the inflamed veins; these disappeared very slowly and at the end of five months slight traces of them were still discoverable. In his other three cases he used the salicylate of sodium, with very good results. He gave it to the extent of one drachm per day, and after the first day found that the temperature fell very decidedly, the pulse became slower, and the œdema diminished to a very notable extent; the disease passed through its phases of inflammation and repair in so short a time that not one of the three patients was confined to bed longer than the third week. No signs of œdema or of nosodities on the limb remained.—*Glasgow Medical Journal—Cincinnati Lancet and Clinic*.

DR. WILLARD PARKER is 83 years old; Alonzo Clark, 80; A. C. Post, 77; Isaac E. Taylor and Austin Flint, 71, and Frank H. Hamilton, 70. Some of these distinguished medical men are still in active practice, notwithstanding their great age.—*Cincinnati Lancet and Clinic*.

A MODEL CERTIFICATE.

Editors Lancet and Clinic:

Several years ago, while spending an hour in the Pension Office, at Washington, I was shown a medical certificate which had been forwarded to the Department and filed with other evidence in support of an application for pension. It was, I thought, too good a thing to be lost or buried, and I took a literal copy of it, which copy I send enclosed.

Very truly yours,

Jan. 2, 1884.

P. S. CONNER.

"The brand muscle which compresses, lowers and extends the linea alba, the muscle of expiration is entirely severed thereby affecting the Scorbutus Cordi, which goes straight up to the navel or umbilicus, and from thence down to the pubis which is evidently the primordial cause of the frequent abscesses of the scrotum. Also from the fact of increased attachment necessarily causes increased cicatrix which is constantly increasing, and hence the increase of all the detrimental symptoms.

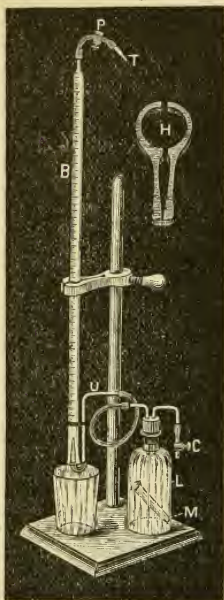
CLINICAL ESTIMATION OF URINE.

The estimation of urea in the urine has for some time been a clinical desideratum. The process settled upon as giving the best results is that founded upon the decomposition of urea by means of hypobromites, which gives nitrogen in the gaseous state, and in such fixed quantity as to enable us to compute the amount of urea.

In *Squibb's Ephemeris*, January, 1884, there is a complete paper on the subject, well worthy of being read and preserved. The application of this test is brought within the means of the practising physician by verbal descriptions and illustrations.

The apparatus which we have found to be convenient for office use is the one known as Fitch's ureameter of which we give an illustration, and the directions for using.

Mr. G. C. Hodge, of Utica, N. Y. has favored us with a descrip-



tion of a modification of the apparatus for the hypobromite test for urea, which in many ways an improvement upon any of the appliances yet described, and is calculated to render this important branch of medical chemistry much more available for physicians who have little time to devote to other and more complex methods. The so-called hypobromite test is now acknowledged to be as free from errors as any that are of practical utility, but the necessity of working with fresh solutions, the irritating character of the vapor of bromine, and the time required for its manipulation, have prevented its very general use. In former numbers of the *New Remedies* are described various modifications of the apparatus, and through the courtesy of Mr. Hodge we are able to illustrate the one here referred to.

The tube U having been attached to the burette B with rubber bands

and burette fixed in the holder, the latter is lowered into a tumbler of water until it nearly touches the bottom. By suction through the tube T, the burette is filled with water, and the pinch-cock P is then closed. Into the bottle L is placed 10 cubic centimeters of hypobromite solution made by adding 2.5 cc. of bromine to 50 cc. of solution of soda (liq sodæ) enough for five tests, or, (and this is one of the of this apparatus) 10 cc. of solution of soda made by dissolving 40 grams of caustic soda in water until the whole measures 200 cc., and a glass pearl of globule containing about 5 cc. of bromine. The pearl having been broken and the bromine and soda solution thoroughly mixed, 2.5 cc. of urine are placed in the small test tube, any excess being removed with absorbent cotton wrapped on the end of a rod. The test tube is then to be carefully placed in the bottle without spilling its contents and the rubber-stopper in-

sented, the pinch cock C being open. Then close the latter, and taking the bottle in the holder H, it is inclined until the urine in the test tube is turned out and mix thoroughly with the test-solution. Gas is at once evolved, and passing through the tube U, enters the burette, displacing an equivalent amount of water. When all evolution of gas has ceased, the figures on the burette will, without further calculation, indicate the parts of urea in 1,000 parts of urine.

Before another estimation, the burette should be lifted above the level of the water in the tumbler and the pinch-cock be opened so that air can be blown through the burette. The burette and glass can then be filled with fresh water, and the operation be repeated with another sample of urine.

At present these bromine pearls can only be obtained of the manufacturer, Mr. Hodge, at a cost of three cents a piece, by the dozen. He anticipates being able soon, however, to furnish them for half a cent less, each.

The saving of time and mathematical calculation in using this apparatus and the small liability to derangement of parts, are items worthy of special notice, as well as the fact that by reversing the burette it is capable of being used for other purposes.

The apparatus figured in *Squibb's Ephemeris* is simpler, but far away in the country or country towns it would be hard to get a graduated pipette, and a fresh solution of hypobromite of sodium. For this reason the apparatus we have figured is more convenient.

The plan of making the hypobromite extemporaneously by using pearls (Rupert's tears) containing a measured quantity of bromine, although somewhat expensive is not an obstacle to one who wants to determine the clinical fact of the presence of urea.



MONUMENT TO DR. J. MARION SIMS.—A movement is on foot for the erection of a monument to Dr. Sims. We know that it would be a great pleasure for many physicians in this State to subscribe to this work, and we make the suggestion that preparation be made to this end, and that subscriptions be forthcoming at the May meeting of the Medical Society in Raleigh, and the amount be sent as a contribution from members of the State Society.

CONVALLARIA MAJALLIS. LILY OF THE VALLEY.

Little has been said in the journals for the past few months on the use of the drug. So that we come back to it now with a feeling that the longer probation has elicited more substantial facts as to its true place in therapeutics. The latest article on this subject is from *Squibb's Ephemeris*, a journal which always brings to our office something worth knowing.

Dr. Squibb prepared a fluid extract from cultivated plants just as the roots had fairly sprouted. He subsequently made a fluid extract from imported wild flowers, and taking in consideration the fact that cultivated plants yield less medicinal principles than wild ones, he found the extract from the sprouting root preferable to the whole plant. Latterly he has prepared the extract from the foreign root, and this has been sent out to all who applied for it.

"Up to this time several competent and careful observers, free from the prejudice of novelty, and from the still more dangerous prejudice of basing general conclusions upon too few cases,—have reported their experience in a guarded way. This experience is still discrepant and therefore difficult to state, so that perhaps all that can be safely said, is that the general kind and direction of the results show that convallaria is worthy of a more extended use before it can be either fully accepted or discarded. It may be pretty definitely said that it is not a simple duplicate of digitalis, nor is it adapted to supersede that important agent, in any large number of cases. Yet its use may serve to differentiate or discriminate between cases which have hitherto been classed together and all treated by digitalis, because there was no other agent that was applicable to any of the class.

"If the uncertain indications from the use of convallaria thus far be not mistaken, the best that can be hoped from it is that it may materially aid physicians in splitting up the digitalis class with groups, some of which may be better managed by convallaria. It is also among the possibilities, if not among the probabilities, that it may prove either or both a substitute and adjunct to digitalis. There are many conditions in which digitalis fulfills all the indications required of it, but in which it cannot be continued in sufficient doses to maintain the good effects without disturbing the stomach and thus interfering with nutrition. In such, or in some such cases at least,

it may serve as a substitute or alternate. In other conditions which seem to indicate the effects of digitalis, but in which that agent shall do no good, or cannot be tolerated, convallaria gives a chance of relief where they may have been less chance without."

* * * * *

The dose of convallaria to begin with is about 24 grains in twenty-four hours.

Dr. Squibb does not give credence to the presence of convallarin and convallamarin in the plant, but that they are the result of splitting-up of the more complex molecule, by chemical means.



A SCRAP OF HISTORY OF PERKINS'S TRACTORS.



The publication of a new edition of Dr. Holmes's Classical Essays on Homœopathy and Kindred Delusions" revives a temporary interest in Perkinism. The following hitherto unpublished extract may give a faint idea of the state of mind that prevailed in this country at the time this delusion prevailed. It is kindly contributed by Dr. W. Thornton Parker, and is an extract from a letter from Dr. Benjamin Parker to his son, Dr. W. Thornton Parker, Sr., dated November 11th, 1842 :

* * * * *

"I am much pleased with Holmes for the most part ; but I have not had the time to read him through. All about Perkinism is perfectly correct and true. I lived in those times, and was in the midst of the excitement. A gentleman in Virginia sold a plantation and took the pay for it in tractors, which tractors died on his hands. Nothing was more common than to buy horses and carriages with Perkins's tractors. But the worst effects of the delusion Holmes has silently passed over. The yellow fever prevailed in New York to a great degree, and proved fatal to thousands. Perkins thought he could cure the fever with his tractors, and went into the city while raging, and, as might be expected, he immediately fell a victim of his own folly."—*Philadelphia Medical Times*.

THE RADICAL CURE OF HYDROCELE.

By JOHN A. WYETH M.D., New York.

The operation of injecting an irritating liquid, such as tincture of iodine, pure or diluted with water, or port wine and water, alcohol etc., into the sac of a hydrocele which has been previously more or less highly recommended by most text books on surgery as efficient and harmless. Nevertheless, fatal results have followed this procedure, and dangerous and extensive sloughing (so easily are the tissues of the scrotum infiltrated) has followed the simple evacuations of the contents of the sac when no injection has been made. Sir Astley Cooper reports two fatal cases after injection; Gross gives another case; still other mention is made of fatal results in "Holmes' Surgery," and I shall report a case further on.

Every surgeon of experience in genito-urinary diseases knows that the scrotal tissues are easily infiltrated. I have seen extensive œdema of the entire scrotum and penis follow a few hours after an exploratory puncture of a hydrocele made with a small-sized hypodermic needle, the fluid oozing out of the puncture in the tunica vaginalis and into the layers of the scrotum. Mr. Davy reports an instance in which extensive sloughing occurred, and even death has resulted from this simple puncture.

The following case I desire to record here: M. S., aged forty-three Germany, cigar-maker; family history good. Patient says he had syphilis "a good many years ago;" gonorrhœa several times, the last attack three years ago; had sore on penis at the same time; no stricture; no pain. Three months prior to June 27, 1883, he noticed that the scrotum began to swell at the lowest portion on the left side, which continued to increase in size to date before given. The tumor measured six inches long, and had a transverse circumference of about ten inches. Urine contains a trace of pus and albumen, considered to be the *liquor-puris*.

On June 27, at the request of a surgical friend, who, being compelled to absent himself from the city, had insisted that I should treat this case by injecting the sac with iodine. I did this operation. The method advised by Van Buren and Keyes was followed. The fluid, measuring about eight ounces, was drawn off with a medium sized aspirator needle, and one-half the quantity of tincture of iodine and immediately drawn back into the aspirator. A small

quantity, estimated at about one-half an ounce, would not return through the needle, and was allowed to remain and to trickle out through the trocar wound.

Pallor and other evidences of slight shock followed the operation, which was done at 10 A. M. At 4 P. M. patient had a chill lasting fifteen minutes, followed by delirium and a rapid pulse scarcely perceptible at the wrist. Half an ounce of whiskey was given *per orem*. By this time a dark blue spot, insensible to the touch and as large as a silver dollar, had made its appearance on the scrotum, extending to the raphé. A free incision was now made into the tunica vaginalis through this spot, the cavity was washed out, and the scrotum covered with a poultice. The iodine which was left in was washed out together with few small brown clots, which I took to be coagulated hydrocele fluid, stained with iodine. Urine passed six hours after operation was colored with iodine, and the breath had a peculiar odor. Temperature on this day was, at 3:40 P. M., 101°; 4:20 P. M., 102°; 8 P. M., 99.8°; 10 P. M., 99.7°. Quantity of urine in first twenty-four hours, $\bar{3}$ xv.

June 28. Temperature from 1 to 11 A. M., 99°. At 2 A. M., passed $\bar{3}$ v. dark urine. Slight vomiting, and again at 9 A. M., after taking milk. Cellulitis of scrotum, penis and contiguous skin of abdomen. 1. P. M., temperature, 101°; 4 P. M., temperature, 102°; urine, $\bar{3}$ ixss. 29. Sloughing; renewed poultices; urine, $\bar{3}$ ixss. 30. Ditto, urine, $\bar{3}$ xiv.

July 1. Patient more comfortable; treatment continued; urine, $\bar{3}$ xiii. 2. Temperature, 99 to 100°; bowels moved. 3. Temperature, 100 to 101°. 4. Patient was seized with a severe diarrhœa, followed by eleven evacuations, which greatly prostrated him before they could be checked with quinine, bismuth, and opium; urine, $\bar{3}$ xv.

July 5. At 6 A. M., while attempting to sit up in bed and lift himself by his hands, he cried out as if in great pain, and fell back instantly dead.

An autopsy was refused.

The cause of death must be left to surmise. I think that uræmia can be excluded, not only from the quantity of urine, which though small was sufficient to wash out the urea, but from the care taken to keep up a regular yet not extreme diaphoresis.

The inflammation was not severe enough to exhaust, since the temperature was not high. The sudden and severe diarrhœa,

with the extreme prostration which it caused, added to the already bad condition of the man, I think, produced in him fatal heart failure, which the digitalis infusion given at intervals could not overcome.

It is evident that the absorption of the iodine was the entering wedge, which was followed by the other accidents which produced the fatal result.

In the other cases of hydrocele which I have treated, I have always done the open operation—i. e., free incision and stitching the parietal layer of the tunic to the integument at the margin of the wound, at times coiling a small drainage tube into the sac. These have all been cured, notwithstanding that in one case of large double hydrocele several injection operations had previously failed. I have heard of no disasters following this method, and believe it both safer and surer than any other. I sincerely hope that surgeons will practice and recommend to their students, as I do invariably to the Surgical Class of the Polyclinic, the operation by incision, to the exclusion of other operations which I believe are more dangerous.—*Annals of Anatomy and Surgery.*

BIMANUAL DETECTION AND REMOVAL OF STONE IN CHILDREN.—Mr. Hugh Smith, in the *Brit. Medical Journal*, July 21, p. 126, reports a case on Mr. Churchill, at the Victoria Hospital for Children of a child, aged 9 years, who was suspected to be suffering from a vesical calculus. The patient being under chloroform, it was decided to determine the shape of the calculus by rectal examination. This being done, Mr. Churchill proceeded to remove the stone by the usual operation of lateral lithotomy. Finding difficulty in extraction with the forceps, and also with the scoop, Mr. Churchill decided to extract the stone by manipulation. The left index finger was introduced into the bladder, and the calculus (a conglomerate mulberry one—weight, 280 grains) was hooked by the finger straight from the fundus to the neck of the bladder. Mr. Churchill then introduced the right finger into the rectum, and, by cautiously removing the left index finger, which fixed the stone, the calculus was tilted up and pressed through the opening into the bladder, and then through the external incision.—*London Med. Record.*

HISTORICAL NOTE ON CONVALLARIA MAJALIS CRITICIZED.

Dr. Jno. R. Quinan, of Baltimore, sends us the following comment upon an extract with the above caption which we published in our November JOURNAL. He says:

“The Historical Note on *Convallaria Majalis* is very interesting. Pietro Andrea Mattioli, was born 1500 and died 1577 and wrote a commentary on the *Materia Medica* of Dioscorides, 1554, and another edition 1565, at Venice; so that I am puzzled to know what edition D. refers to in 1621 as the editor was then *dead*. Mattioli may have been right in what he says about the popular use of Lily of the Valley, but I doubt his correctness in assuming that Dioscorides referred to *this* plant. We have a good edition of the Greek Botanist, with Latin interpretation by Kühn, 1830 and in treating of struma Dioscorides mentions (Vol. 11, p. 174, cap. 154) the *chamaikerassos*, (*χαμαικερασος*;) literally ground-cherry, as efficacious in that disease. The Latin interpretation of the text is ‘*Chaimaicerassus herbula est, quæ inter filices nascitur, ac eodem tempore, quo fructus cerasi arboris. Fructus duos tresve produit cerasio similes : flores sunt perquam odorati moscho instar. Hujus manipulas e radicibus tribus foliis ac fructus in vino coquitur ad tertias estque certissimum exploratis simum remedium.*’ i. e. The ground cherry is a small plant which grows among ferns and at the same time with the fruit of the cherry tree. It produces two or three drupes like the cherry: the flowers are as odorous as musk. A handful of this (plant) from the three radical leaves and the fruit boiled in wine down to one-third, is a very certain and well-tried remedy (for the struma).”

THE SANITARIAN after an experiment of a year as a weekly journal, has returned to its original monthly issue. It is far more acceptable in this form, and has been greatly improved in editorial and mechanical execution. Dr Bell's *Sanitarian* was the first journal of any importance, devoted to sanitary science in this country, as it is now the very best.

NOTES.

IRON DYED SILK.—Send a postal to Wm. Snowden, 7 South 11th Street, Philadelphia, for a specimen of superior surgical silk, and, mention having seen this in the JOURNAL.

TO CLEANSE THE GAIFFE BATTERY.—DR. F. A. BURRALL, of this city, writes: "I find that by putting salt and water into the cups of the Gaiffe battery, after they have been used, the yellow sulphate of binocide of mercury is readily removed from them. This method is a good substitute for the vigorous brushing and scraping which are otherwise necessary. Those who use this convenient faradizer will, I think, appreciate the benefit of this suggestion."—*New York Medical Record*.

POST-GRADUATE SCHOOLS.—The post-graduate schools, both in Philadelphia and New York, have been well attended this winter. At the "Philadelphia Polyclinic and College for Graduates, there have 72 paying pupils in attendance, and between March 1st and December 31st last, there were over 3800 new patients in attendance.

The New York Post-graduate Medical School has been so successful that it has secured much larger quarters, which it will occupy in February. The total number of its students has been 140, and its clinical material very abundant.—*Philadelphia Medical and Surgical Reporter*.

CIMICIFUGA IN EPILEPTIFORM NIGHTMARE.—Dr. Ed. M. Small, of Eastport, Maine, sends us the report of a case occurring in his practice almost identical with one published recently in these columns in the report of Prof. H. C. Wood's clinic. The disease was epileptiform nightmare, and it was cured in Dr. Small's case by half a teaspoonful of powdered *cimicifuga racemosa* being administered at bedtime. The paroxysms at once ceased, and there had been no return in a lengthy period of observation. The patient also was ordered to partake of only a light supper each night.—*Philadelphia Medical Times*.

DIMINUTION OF BLINDNESS.—Says the *Medical Times and Gazette*: The authors of the recent Census note the encouraging fact

that the proportion of the blind to the population has not only decreased with each successive enumeration since 1851 (in which year account of them was taken for the first), but the decrease in the decade ending in 1881 was much greater than in either of the preceding decennial intervals. The number of cases returned on this latter occasion was twenty-two thousand eight hundred and thirty-two—equal to one blind person in every one thousand one hundred and thirty-eight. This decrease is considered to be fairly attributable to the progressive improvement in the surgical treatment of affections of the eyes, and to the diminished prevalence among children of such diseases as small-pox.

POISONING BY JEQUIRITY.—From the *London Medical Record* we learn that Dr. Lagleize was called to see a youth, aged 19, who presented the following symptoms: The face was swollen, the eyes staring; there was great salivation, as after an injection of pilocarpine; the pulse was small and weak (180 to the minute), the skin dry, the extremities cold. While he was wondering what could have given rise to these symptoms, Dr. Lagleize noticed on the ground some little seeds, which, on picking them up, he recognized as the seeds of jequirity. On interrogating the family as to whence they came, he learned that a friend, recently arrived from Brazil, had brought them as curiosities. As the symptoms were somewhat like those produced by pilocarpine, he administered an emetic of ipecacuanha, and afterwards sulphate of atropine in a mixture, and applied warmth to the extremities. The patient soon recovered, and the next day was pretty well.—*Phil. Med. and Surg. Reporter*.

DETECTION OF STONE IN THE BLADDER OF CHILDREN BY THE BIMANUAL METHOD—Mr. F. S. Edwards, in the *Brit. Med. Jour.*, June, 1883. p. 1282, refers to a paper in the journal, p. 1225, where Mr. Sansome remarks that detection of stone in children by the bimanual examination has not been mentioned before. Mr. Edwards draws attention to Bryant's *Surgery*, p. 93, where the following paragraph will be found:—"In children, the introduction of a finger into the rectum facilitates at times the search, and the pressure of the hand above the pubes facilitates the detection of a stone." The subject is also mentioned on p. 1039 in Holmes' *System of Surgery*, 1870. [In the *Med. Times and Gazette*, April, 1882, p. 366, the mode of rectal examination in cases of vesical calculus in the child is fully detailed, and it is stated "that its utility is generally acknowledged."—*London Medical Record*.

BOOKS AND PAMPHLETS RECEIVED.

Borderland Psychiatric Records—Prodromal Symptoms of Psychical Impairment. By C. H. Hughes, M.D., St. Louis. Reprint from the *Alienist and Neurologist*, January, 1884.

The Opium Psycho-Neurosis. Chronic Meconism or Papaverism. By C. H. Hughes, M.D., St. Louis. Reprint from *The Alienist and Neurologist*, January, 1884.

The Proceedings of the Naval Medical Society. Washington: Printed by Judd & Detweiler. 1884.

Proceedings and Addresses at a Sanitary Convention, Held at Muskegon, Michigan, August 23 and 24, 1883, Under the Direction of a Committee of the State Board of Health, and a Committee of Citizens of Muskegon. Supplement to the Report of the Michigan State Board of Health for the Year 1883. (No. 200.) Lansing Mich. W. S. George & Co., State Printers and Binders. 1883.

Transactions of the Colorado State Medical Society at its Thirtieth Annual Convention, held in Denver, June, 1883. Denver, Colorado: Merchant Publishing Co., Printers, 220 16th Street. 1883.

Variations in Nature. An Address before the American Association of the Advancement of Science, Montreal Meeting, August, 1882. By Thomas Meehan. Printed at the Salem Press, Salem, Mass. 1883.

Fifth Annual Report of the State Board of Health of Kentucky. 1883. Louisville: The Gilbert & Mallory Publishing Company. 1883.

Some Recent Progress in Diseases of the Nervous System. By Talbot Jones, M.D., St. Paul, Minn. Reprint from *The Alienist and Neurologist*, St. Louis, January, 1884.

The New York Post-Graduate Medical School, 213-215 East 23d Street. New York City. Session of 1883-84.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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ORIGINAL COMMUNICATIONS.

TAPPING OF OVARIAN CYSTS—STRICTURE OF THE RECTUM, RECTO-VAGINAL FISTULA—OPERATION.

A Clinical Lecture delivered at the Hospital of the University
of Pennsylvania.

By WILLIAM GOODELL, M.D.,

Professor of Clinical Gynecology in the University of Penn-
sylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CARO-
LINA MEDICAL JOURNAL.

TAPPING OF OVARIAN CYSTS.

GENTLEMEN:—This is the case which we had before us last week. I shall briefly relate this history. She is 39 years old, has been married 15 years and has had one child. She in all probability had pelvic peritonitis two years ago and has had recurring attacks every three or four months since. The tumor which she presents has been increasing in size for the past two years. She has not menstruated for

a year. She has lost eighty-five pounds in weight during the past two years. Examination per vaginam shows bands passing from the cervix to the vagina and also papilomatous projections from the cervix which were examined by Dr. Formad and said to be cylindrical epithelioma. The cervix has disappeared.

I examined her before you last week and we satisfied ourselves that it was a cyst, but its character was not determined. I have since had an opportunity of seeing her family physician and the history which he gives me leads me to think that it is possibly malignant.

I shall aspirate the cyst this morning. By wrapping a piece of ice in a towel, and dipping one end in salt we make an extemporaneous freezing mixture, which will, in a few minutes, so freeze the point at which I shall make the puncture that she will not feel the aspirating needle. I pass the catheter to be sure that the bladder is empty. I do not, as a rule, like to tap ovarian tumors, but there are many patients who will not allow the operation to be performed until tapping has been tried. They have heard of cases which have been cured by this means. I shall now pass the trocar and you see that at once a whitish colored fluid flows into the receiver.

I want to say a few words about aspiration. Are there any dangers connected with it? If you were to read the books on this subject you would say "there are no dangers." That is not true. There are dangers. The first one to which I shall allude is this: suppose, as I have often seen, that the pedicle is spread over the front of the tumor and lies directly in the line of the trocar. This is full of blood vessels and if you puncture it, you will get a hemorrhage which will ooze into the peritoneal cavity and may cause peritonitis or the hemorrhage may be of such an amount as to cause dangerous symptoms. I have seen inflammation produced in this way.

There are other dangers to which I shall refer in a short time. As I have said I never aspirate if I purpose operating. My object in this case is to relieve the woman and to discover, if I can, whether this tumor is benign or not. In many cases, it is only fair that we should first try tapping for it is often impossible to say with certainty whether the cyst is one of the ovary or one of the broad ligament. I do not think there is a well authenticated case where a cyst of the ovary did not return after tapping. In cysts of the broad ligament containing a spring water fluid, it is different. I think that in at least one half the cases, the cysts do not refill after tapping. Tapping is, therefore, at first, the proper treatment.

There are certain diagnostic marks by which we can tell a cyst of the broad ligament. If the cyst is found sometimes tense and sometimes flaccid or if it remains more or less flaccid even while enlarging, it is usually a cyst of the broad ligament. My explanation of this is that the cyst walls are very thin and elastic so that we do not have the same tension as in thicker walled cysts. In the second place, the fluid being very bland is, perhaps, more readily absorbed than that from an ovarian cyst. In these cases of cyst of the broad ligament it is only right and fair to aspirate.

This method of removing the fluid from an ovarian cyst by aspiration is much safer than removing it by the old fashioned trocar. When the trocar was used, the number of fatal cases after tapping was very great; indeed the mortality from tapping was then greater than it now is from ovariectomy. I want you to remember that.

I have referred to some of the dangers from aspirating. Another is that irritation of the sac may be set up. Some years ago I aspirated and got irritation of the cyst, which resulted in septicæmia and I was forced to operate. Patient recovered. I have had hemorrhage from tapping per vaginam. In another case I hit the pedicle which was spread in front of the cyst. Hemorrhage into the peritoneal cavity took place. When the operation was performed, little disks of fibrinous matter from the coagulation of the blood, were found. There were quite a number of them varying in size from a twenty-five to a fifty cent piece. There had also been some peritoneal inflammation.

Why is it better not to aspirate an ovarian tumor? I have spoken of the hemorrhage, which by the way may take place in the abdominal wall. This I have repeatedly seen happen when the trocar was used, though I have never seen it with the aspirator. We may have inflammation of the cyst. This is an unfortunate accident for at once the system breaks down and we have septicæmia. If the cyst is tense, some of the fluid may escape into the cavity of the abdomen and produce peritonitis, gluing the wall of the cyst to that of the abdomen and to the intestine, thus causing adhesions. Again, a monolocular cyst of the ovary is very rare. You will almost invariably find little cysts projecting either within or from the surface of the mother cyst. When you tap such a tumor for the first time, you may be able to remove almost all the fluid and the cyst is entirely collapsed. The child cysts now grow very rapidly and at the

second tapping, the cyst does not collapse to the same extent. Finally after several tapplings you may be able to remove only a small quantity of fluid and when the operation is performed a much larger incision is required.

We are justified in tapping under the following circumstances. A woman comes to us with a large cyst and has œdema of the limbs and of the body. She most probably has also some collection of fluid in the pericardium and pleural cavity. It is then right to aspirate for the purpose of causing the absorbents to act and to get rid of these complications which might interfere with the success of an operation. In the second place it is right to tap if the woman insists on it, for you cannot be sure that the cyst is ovarian. In the third place, when the symptoms lead you to think that it is a broad ligament cyst, you should always tap, and not perform the operation unless the tumor returns. The so-called bursting cysts are cysts of the broad ligament. The parovarium is a small body situated in the broad ligament between the ovary and the Fallopian tube and consists of a number of tubules. What its special promise is, I do not know. Sometimes one or more of these tubules are large and form a cyst. There is another cyst sometimes found. I have no doubt that many of you in making post-mortem examinations, have seen hanging from the fimbriated extremity of the Fallopian tube, a small cyst about the size of a good sized pea. It is a remnant of fetal life. I believe that this cyst may increase in size, then burst and refill. I have seen this happen. I once had it burst in my office. In a lady whom I had under my care some time ago, this cyst would enlarge to about the size of a lemon, causing annoyance by its pressure. It would then burst and gradually refill. Once while examining her, it burst by the pressure of my finger. I think that it is a good plan when the history is that of a bursting cyst, to try to burst it in your office.

The tapping is going to give this woman great relief. The cyst is now almost collapsed and we see on the right side a prominent lump which is exceedingly painful. She says that she cannot sleep on account of the pain. Why it should be so, I do not know. An ovarian tumor is usually not painful but when there is pain it is generally due to adhesions. In the case of the bursting cyst to which I referred a few minutes ago, the patient had pain where the cyst burst and when I emptied it. This was accompanied by a feeling of

traction over the stomach. When I removed the tumor (a successful operation) I found adhesions to the omentum and consequently when the tumor was empty it pulled on the omentum and thus on the stomach. In another case, the lady suffered tortures after the tumor reached the umbilicus and the fluid had to be removed. Aspiration was performed twenty times before the operation was permitted.

I am tempted to pass the aspirator into this lump on the right side, but I shall not do it for two reasons. In the first place I am sure that this cyst is going to refill, and this small one if emptied will refill very rapidly. Secondly, as there is so much pain, I feel that there is a good deal of vascularity about this small tumor.

Having removed all the fluid I am ready to withdraw the canula. I press the abdominal wall backwards so as to bring it in contact with the cyst but I do not use much force for if I did, I might squeeze a little of the fluid into the peritoneal cavity. The aspirator should always be withdrawn slowly for it may have passed through a cyst in front and entered one behind; but by drawing it out slowly you empty both cysts. Over the small opening I place a piece of adhesive plaster. I shall have this fluid carefully examined, but it may be necessary to make an exploratory operation to determine whether or not the disease is malignant.

STRICTURE OF THE RECTUM, RECTO-VAGINAL FISTULA—OPERATION.

In the next case that comes before us it is somewhat puzzling to know exactly what is best to be done. I shall briefly give you her history. She came to me over a year ago with a bad recto-vaginal fistula, i. e., a communication between the rectum and vagina. On examining her, I found a stricture of the rectum and this stricture was the cause of the fistula. It may seem strange to you that the fistula was below the seat of stricture, but this is usually the case. We should suppose that the collection of fæces would be above the stricture and that we should there get ulceration, but it is not so. In the great majority of cases, the collection occurs below, leading to ulceration and perforation.

The first question that arose in my mind was, "What is this stricture? Is it malignant? Is it syphilitic, or is it a natural stricture?" I do not think that it is syphilitic and I doubt its being malignant.

She also had a lacerated perineum. At that time I operated on both the stricture and torn perineum at the same sitting. I stretched the stricture, scraped it and applied nitric acid. I cured the laceration of the perineum but a small fistula remained. She is very anxious to have this opening closed and I shall now examine to see what can be done. This is a very small fistula, but the trouble is that she cannot hold her wind. It comes away with an audible sound or else an odor escapes which is very embarrassing.

What is best to be done? Shall I close the opening from the vagina and rectum, or shall I divide the perineum and perform the operation for torn perineum? I shall before deciding, examine per rectum as to the condition of this stricture. The stricture is very much improved. I can pass my finger without difficulty. I shall perform the operation for a complete tear of the perineum. I pass one blade of the scissors through this opening and cut the perineum. I think this is the most sensitive part of the body. The sensitiveness of the eye is nothing compared to that of the vulva. We have her almost completely under ether and could perform an amputation without giving her any pain, but as I cut this vulval surface she resists. I denude the surface by cutting narrow strips across the laceration from one side to the other, commencing at the lowest part and gradually passing upwards. I can hardly believe that this is malignant as the woman is still living and the disease is better.

I want to show you to-day the operation which I have lately performed for ruptured perineum and one which I consider an improvement on the old operation. This, gentlemen, is the silk-worm gut, the ordinary fishing snood. It is made by taking the silk worm just as it is about to spin its cocoon, laying it on a board, placing a compass in one end and one in the other end drawing it out. The result is this, which is called silk-worm gut. The advantage is that it is an animal substance and will gradually dissolve. It lasts longer than cat-gut which perishes in twenty-four hours. It lasts, perhaps, a little too long. It should be placed in water for several hours before using. This makes it more pliant. I pass the first stitch at the angle of this **V** shaped incision in the rectum and tie it with the knot in the rectum. This brings that part together and each succeeding stitch will close it up more and more. In my book, I tell you to close this opening by Emmet's stitch, that is by passing a deep wire suture around the angle and bringing it together, but that is not so good a

plan as this for it does not heal as well, the anus is left a little larger than it should be and the woman has not the same control as before. These stitches are left in. I pay no further attention to them. I did this operation last week and the patient is now going through the interesting process of having her bowels moved. It is a very interesting process both to the physician and to the patient, for a scybulous mass may tear the parts open. In addition to the small stitches I use Emmet's. Then the sphincter has been torn, it contracts and we have the little wrinkles only at the lower portion of the anus, but after the operation has been done with the little stitches, the ends of the muscles are brought together and the wrinkles come up.

I am now ready to pass the silver wire stitches. The first is entered low down nearly on a level with the lower verge of the anus, passed as high as possible between the vagina and rectum and emerging at a point opposite that of entrance. The first two stitches do not appear either in the rectum or in the vagina. In passing the last stitch, I run it through the undenuded portion of mucous membrane above, so as to draw it down. Before securing the sutures with the shot, I ask the doctor to inject carbolized water into the wound to free it from all clots. I now show you the result. The parts are in perfect apposition but I am afraid that we shall have left a recto-vaginal fistula, on account of the elasticity of the tissues in the neighborhood of the stricture.

I now place a napkin between the knees and bandage them together. A Skene-Goodman catheter will be placed in and allowed to remain for a week. The bowels will not be moved for ten days. She will receive a quarter of a grain of morphia, morning and evening. The bowels will be moved in the following manner: On the morning of the tenth day the following injection will be given to soften the hardened fæces in the rectum.

R.

Glycerinæ

Olei olivæ āā ʒ i.

Misce.

At the same time she will take two tablespoonsful of castor oil. When the bowels are moved she will lie on her side on a rubber cloth and the nurse will sit beside her watching to see that a scybulous mass does not tear the parts open. She is to be instructed to break these masses with a hair pin taking care to always press

towards the sacrum. On these occasions I have had the parts torn by want of care on the part of the nurse when the bowels were moved. I, therefore, as I have said, always look upon this event as one of great interest both to the physician and to the patient.

EPITHELIOMA OF THE NOSE TREATED WITH ARSE- NIC PASTE AND HEALED UNDER POULTICES.

By A. H. GOELET, M.D., New York.

Mr. H., of North Carolina, applied to me (October 10th, 1883,) for treatment of a troublesome sore on the bridge of the nose to the right of the median line, which had existed for three years, commencing as a small pimple. He had resorted to almost every means to heal it, without success.

When seen it was the size of a ten cent silver piece, with elevated hard edges, and scooped out centre, with a disposition to scab; and exuded a thin serous fluid. When irritated the discharge became purulent and occasionally colored with blood. At one time it had spread downwards a little way and this portion had skinned over, but with a thin unhealthy skin which was easily broken down.

He presented himself for treatment Oct. 26th and it was decided to use a paste of arsenious acid, and pulv. tragacanth, equal parts by weight, formed into a paste with water; the slough to be treated with poultices of flax seed meal and these to be continued until healing is complete. There has been no return of the disease after this treatment.

The treatment ordinarily resorted to in these cases, viz: the actual cautery, the curette, or scoop, and chemical caustics, followed by a rapid healing process, while successful as an operation, in that healing may always be obtained, is not always followed by good result. There is frequently a return of the epithelioma, and for the reason that we can never be sure of the removal of all of the diseased tissue, by these means. In the rapid healing process, the diseased tissue left behind is covered up, and in time there will be a return of the trouble.

The caustics used in the present case will attack and break down every particle of diseased tissue if carefully applied, and the slow process of healing under poultices causes the resulting sore to throw off any portion which may be left behind.

While less painful as an operation (requiring no anæsthetic) it is a very much longer and more disagreeable mode of treatment taking from three to four weeks, and the poultices must be constantly renewed.

About 2 P. M., October 26th, the paste was applied, great care being taken to cover every portion of diseased tissue including all of the elevated border. Afterwards a piece of cotton (not absorbent) just the size of the space covered by the paste and thick enough to absorb the serum which will exude through the paste when it commences to act, is applied over the paste and the whole left on for 18 or 24 hours according to the depth of the sore and the age of the patient. (Absorbent cotton would absorb too rapidly).

The cotton must not project beyond the paste and the discharge must be kept off the surrounding healthy skin.

Very little pain was experienced during the first six hours, but during the pains, while not severe, was very annoying and kept the patient awake.

The next morning about eighteen hours after the application of the paste the face on that side was considerably swollen and the eye somewhat closed, but the pain had ceased.

Poulticing was commenced now and applied in rather a novel way. A small bag was made of a piece of solid silk the size of the palm of the hand cut round and having a draw string run around its edge to draw it together. This was filled with the poultice and the mouth of the bag drawn almost together leaving an opening just the size of the surface to be covered.

This is flattened out and applied over cotton and all and held in position by strips of adhesive plaster; and a handkerchief tied around his head over all.

The cotton will usually come away with the first or second poultice, and in about a week the slough will separate, leaving a healthy granulating surface which will discharge pus in a great quantity.

In a few days after the poulticing was commenced the swelling left the eye and the face resumed its natural appearance.

At the end of a week the slough separated leaving a fresh healthy

looking surface not deep but nearly the size of a silver quarter. Poultices were applied every two hours during the day and two or three times during the night, and continued after the separation of the slough.

Frequent changing of the poultices is very necessary both on account of cleanliness and to maintain warmth.

The surface immediately commenced to fill in around the margins and at the end of three weeks there was only a surface about the size of a split pea, which was still discharging pus. During the last week of the treatment nitrate of silver had to be applied once or twice to granulations which were too free.

Nov. 22d, the poulticing was discontinued as the healing was complete and there was nothing left but a white scar which was not noticeable at a distance.

243 West 54th Street.



COLLODION.

Mr. Sampson Gamgee, one of England's ablest surgeons, writes in the *Birmingham Medical Review*: To swollen parts which cannot well be managed, collodion is especially applicable for the compression attending its contraction. I was lately consulted in the case of a good looking boy considerably disfigured by a red and swollen nose, which became very pale and visibly contracted just after I painted it with successive layers of collodion. I repeated the application three times in the succeeding fortnight, with the effect of producing shrinkage of the organ to its natural size and color.

When the nasal bones are fractured, a very effective mold for keeping them immovable, after adjusting them with the fingers, may be thus made: place over the nose a thin layer of absorbent cotton soaked in collodion; as it dries another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give a buttress-like support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peels off.—*Louisville Medical News*.

SELECTED PAPERS.*

SKETCH AND REMINISCENCES OF THE LIFE OF DR. J. MARION SIMS ; AS GIVEN AT THE LATE MEMORIAL MEETING OF THE MONTGOMERY COUNTY MEDICAL SOCIETY.

NC Med J. (O.S.) vol 13: 63-76, # 2

By W. O. BALDWIN, M.D., of Montgomery, Alabama. Feb. 1884.

[*From Gaillard's Medical Journal.*]

Dr. W. O. Baldwin said:

Mr. President and Gentlemen :—In my somewhat lengthened life it has often been my lot to mourn the death of cherished friends and associates, and to feel those bitter heartaches which spring from lost companionship and cherished affections. One by one, I have seen many such whose lives had become a prominent part of my pleasures here pass to the spirit land ; but seldom has my heart been so filled with gloom as since the morning when the wire brought us the news of the death of my old and loved friend, Dr. Marion Sims.

I am sorry I am not able to pronounce, as you have requested me to do, a fitting eulogy upon the life and achievements of this great physician and good man. This duty belongs to an abler tongue than mine, and more ample opportunities than I possess. Rest assured, however, that the task will be performed in due time, and that the world which so fully acknowledged the amplitude of his genius and the vastness and grandness of his benefactions to suffering woman whilst living will not fail to accord to him when dead that niche in the temple of fame which he so justly deserves.

I probably know more of Dr. Sims' personal and professional history whilst he lived in Alabama than did any one else, except his brother-in-law, Dr. R. B. Jones, still one of our esteemed members.

So far as I can learn of his history, there was nothing particularly striking in his character up to the time when he settled in this city, in the fall of 1840. I learn from persons who knew him almost from his childhood, that when a boy he was not particularly remarkable for traits of character which distinguished him above other boys of his age. In his classes at school he stood fairly well, but was not precocious, and attracted no particular attention beyond his hand-

somely chiseled face, his delicate physique, and his genial and playful turn of mind.

After graduating at the renowned college of South Carolina, he studied medicine in the office of Dr. B. C. Jones, at Lancaster, a small village in the district in which he was born, and about ten miles from that spot. He afterwards attended lectures at the medical college at Charleston, South Carolina, but received his diploma at the Jefferson Medical College of Philadelphia. After graduating he returned to Lancaster, and for a short time offered his services to practice medicine in that village. As is often the case with young men attempting to practice in the towns where they had passed their boyhood, he did not meet with great encouragement, and after remaining there but a short time he removed to this State (Alabama), and located in the fall of 1838 at Mount Meigs, a small town about twelve miles from Montgomery. He remained about two years, during which time he returned to Lancaster in 1836, and married Miss Eliza Theresa Jones, who still survives him. After returning to Mount Meigs with his wife, and remaining about a year longer, he removed to Macon County in 1837, and settled in a neighborhood near Cubihatchie Creek, and not far from a little place called Cross Keyes. From this place he removed to Montgomery in 1840, bringing with him his little family—consisting of, I think, his wife and two little girl children. It was at this juncture of his life that I first knew Dr. Sims. He was about six years my senior, yet we soon became intimate friends, I suppose partly from the fact that I was nearer his age than any of the other physicians of the place, and the additional fact that neither of us was overwhelmed with business, and had plenty of leisure to cultivate each other's society. I thought he was the most winning and captivating man I had ever met, and I soon learned to love him as I did my own brother, and meeting a reciprocal feeling of attachment on his part, our intercourse soon ripened into confidential relations, which were not disturbed during his residence in this place.

At the time Dr. Sims located in Montgomery, he had scarcely any income except from his profession, and that being quite limited for the first year, he was sorely troubled about meeting his current expenses for a time.

But his was not a nature to be discouraged long. He was all zeal, energy and pluck. Within a few months after he located here,

the operations for club-foot and cross-eyes, the latter of which had but recently been devised by Dieffenbach in 1839, and practiced successfully by him, was creating quite a sensation in Columbia, S. C. Dr. Toland, then of that city, and now of San Francisco, had but recently visited and returned from Paris, and was making quite a reputation as a surgeon by performing these operations in Columbia. I heard Dr. Sims read from a newspaper published in that city the first accounts he had ever seen of the operation for cross-eyes, commenting most favorably upon Dr. Toland's success. This, I believe, was the starting point of the great success of Dr. Toland as a surgeon.

Dr. Sims immediately procured for himself a neat case of eye instruments, and was not long in finding cases of each of these unseemly deformities upon which to try his skill.

I was present at his first operation for each. They were attended with beautiful success, and, being novel, were much talked about. He was, even, at that day, a remarkably neat and pretty operator, and I think handled the knife with more grace and skill than any man I have ever known of his age. His first successes brought him other cases, until within one or two years he had about finished up and straightened all the cross-eyes and club-feet within forty or fifty miles of Montgomery. This proved to be his stepping-stone to general surgery, and within a few years more he had the largest surgical practice in the State, excepting, perhaps, that of Dr. J. C. Nott, of Mobile. He was a bold, fearless and dashing operator, and would undertake almost any case that any other surgeon dare encounter.

At this day we had no such thing as specialties in this part of the country, and a man who could operate for cross-eyes would be trusted to operate in the most formidable surgical diseases, and was also considered a good physician in all the various departments of medicine. So that his surgical reputation in turn brought him into general practice, and very soon had the largest family practice that had ever been done in this place by any physician up to that time. His services were bought by all classes of people, and in all kinds of cases. He was frequently, though still a very young man, called into consultation with the oldest and most experienced physicians of the place, men who had long been established in practice. He was immensely popular, and greatly beloved, so that he was a formidable rival to the best established physicians, and with all these facts it

would not be greatly surprising if he did not always escape criticism. But when such things were carried to his ears, they never made the slightest difference in his feelings, or his deportment towards the authors of them, but he would meet and pass them with the same kind word and pleasant smile which was always his custom.

When Dr. Sims came to Montgomery we had no medical society here for the report of cases and the discussion of medical subjects. Very soon after he located here he took an active part in the formation of the old medical society, and was from that time one of the leading members in its affairs, and much of the *esprit du corps* which has since distinguished the physicians of the place was due to his example and influence.

Whilst he lived here he performed almost all the important surgical operations known to science at that day. He was from the first a hard student, and thoroughly methodical in keeping notes, records and histories of his cases, and in keeping up with the medical literature of his day.

After the first year of his residence here he kept a private hospital in which to care for his surgical cases. This, after he first became interested in his speculum and in uterine surgery, he devoted exclusively to females, and especially to such cases in uterine surgery as were calculated to test the value of his speculum, in which he was already deeply interested.

I do not remember the precise year, but it was after he had acquired his great local reputation as a surgeon that he became deeply interested in working out what was at first known as his duck-bill speculum, the vaginal speculum which now bears his name, and which was the foundation of the brilliant reputation which he has since achieved. He interested his medical friends in the country in hunting up for him difficult cases of uterine diseases which had resisted treatment in the hands of other physicians, and he was delighted when among these he could find a case of vesico-vaginal fistula, that loathsome disease of women, which had previously been regarded as the opprobrium of surgery, and which physicians rather shunned than courted. He became enthusiastic in this as he was in all his pursuits, and was not slow in finding cases of this disgusting disease, particularly among the slave population, whose management in accouchement was generally confined to the ignorant midwives of their own color. His efforts promised success from the start, suffi-

cient to encourage him to continue his labors. Failures did not dishearten or repulse him, but he worked on and on, sometimes performing dozens of operations on the same case, until final success was achieved. During all this time he was devising methods and plans for his procedure in his operations, and was inventing instruments and appliances as collateral aids to his speculum. Of all his labors, trials and achievements in this direction I think he has somewhere published a statement, probably in the *American Journal of Medical Sciences*, or it may be found perhaps, in his book entitled "Notes on Uterine Surgery," which I have not looked at lately.

If my memory serves me correctly, this brings us to about the year 1849, when in the midst of his investigations his health failed him, and he gave up much of his time to visiting different health resorts in order to regain it. This was a serious drawback to him, and came near ending his life. Having no regular or fixed income, and receiving now but little from his professional services, his financial affairs suffered greatly, and he again became hard pressed for ready means to support his family, which had to be grown larger and much more expensive than when he first came to Montgomery.

About the year 1851 or 1852, I think it was, he began to entertain the thought of leaving Montgomery, and about that time he sold his office to Dr. Nathan Bozeman, and took that gentleman into partnership with him. Dr. Bozeman has since that time attained great distinction as a gynecologist, and is at this time one of the surgeons to the Woman's Hospital of New York. The plea which he gave for wishing to remove to New York was that he believed this climate was unsuited to his health, but it is also probable that his desire to find a larger field in which to display his discoveries in that department of surgery to which he had lately been devoting his time had much to do with his desire to change.

From the time he reached New York to make it his home (I think in 1853), I shall not attempt any further connected account of him.

I will say, however, after further and fully demonstrating the value of his speculum and various other instruments and devices used in his operations, and in displaying his own superior skill in the use of them, he devoted himself to the thought and purpose of founding, through his exertions, a great charity, in that large metropolis, for the treatment of diseases peculiar to women. You all know of his labors in that direction, for they are now a matter of history. You

all know how faithfully he labored with some of the great and benevolent of his own profession, and how he besought and obtained their aid; how he appealed to the hearts and enlisted the help of the influential, the opulent and the philanthropic; how he visited and obtained from the Legislature of the State a donation of \$50,000; how he besought the City Fathers for municipal aid, and procured from them a grant of land from the city which constitutes the site on which the hospital now stands; how he, with ceaseless and tireless energy, worked and planned with a devotion and singleness of purpose rarely met with, until the Woman's Hospital was an accomplished fact. This act of his alone shows what a magnetic power he must have possessed. How he, a stranger; he who had scarcely emerged from the obscurity of a country life, and himself in poverty, could so move the hearts of the people of a great city such as New York, and make himself the first and final cause of a great enterprise which, like the Woman's Hospital, should be a blessing to his race, shows how earnestly and untiringly he must have exerted his powers of persuasion over the minds of men. His effort in the scheme of establishing this hospital, strange to say, was not always without opposition from quarters from which it should have been least expected.

Dr. Sims' health was never robust, and yet he could endure an amount of prolonged physical exertion which was remarkable for one of his apparently delicate physique. He had lived beyond the age of three score and ten, and yet his death was a great surprise to those of us who knew something of the elasticity of his constitution and the great care he always took of his health. I have seen much of him within the last fifteen years; I have been with him often in New York, and have met him at various other places, and twice during that time he has paid long visits to Montgomery, and I was led to believe that he would probably reach four score and ten, so perfect seemed his physical and mental preservation. When I saw him last he looked as if had not more than reached the meridian of life, and he told me he thought he would live to be ninety—though at that time he had no idea of any organic trouble about his heart. Only a few days before his death, I received two letters from him, written on two consecutive days, in which he says: "You can't imagine how disappointed I am that I could not make you all a visit this fall. But if I live another year, you may count on seeing me

in Montgomery. But for that dreadful pneumonia, I would certainly have lived to be ninety. But my heart gives me so much trouble that I have given up the idea of longevity, still I hope to hold on a while longer." While he was in Rome last, in one of my letters to him I begged him to stop his wandering, cosmopolitan life, and settle down in New York, and die there when it should please Heaven to end his days. In his reply, under date of Rome, January 14, 1883, he says: "I spend most of time in Europe because my life is more pleasant here; my fees are much larger, I make more money, my work is lighter, and I have more leisure." And in the last of the two letters referred to above, he again refers to the same subject, and says: "I cannot follow your advice and settle in New York. I could not possibly do the work there. I must go, and will sail on Thursday, the 8th, on the Celtic; I shall remain about three weeks in Paris, on my way to Rome." During the latter part of the summer, my letters from him were written from the residence of Mr. Yulee, formerly United States Senator from Florida, but now living in Massachusetts. Whilst there he was occupied chiefly in dictating to a stenographer his autobiography. He sent me advance sheets as they had been printed by a type-writer. It consists of a brief history of his life, modestly told, interspersed with little anecdotes, and life-stories which no one could tell so well as himself, if at all. It is deeply interesting and reads like a romance. He did not expect to complete it before he reached Europe, but I sincerely hope he has brought it far enough to make its completion an easy task for one of his children.

Dr. Sims' domestic relations were most fortunate and happy. The wife who survives him, and who now sits in the tearful and hopeless agony of her grief within the precincts of Madison avenue, was the sweetheart of his boyhood. She was a loving and cheerful companion, a wise counselor, a true helpmeet; and throughout his brilliant but chequered and eventful life she shared his prosperity with joy and gladness, and bore his adversities with becoming patience and resignation; but at all times and under all circumstances she has been to him "like the ivy to the oak, which clings closest in the storm." It was beautiful to see him in the sanctuary of his own home, when surrounded by his wife and children, and witness their common devotion, where even in his advanced age he seemed as the "big brother" of the family. And when in their youth, with but

two little children hanging upon their hearts, I used to visit them at their modest little home in this place, they made a picture of sweet and confiding domestic bliss which has not, in all these changing years, left my memory. At that time I had no matrimonial ties or expectations, but their intercourse I am sure left a charm and a lesson on my heart which has not been without its pleasures as well as its profits. In later years, he has expressed to me the same chivalric and tender devotion to his old sweetheart, and assured me that all he was in this world was due to his fortunate selection of a wife.

As an author Dr. Sims stood well. He was never a voluminous writer on any of the subjects of which he treated. His work entitled "Notes on Uterine Surgery" was his largest, and was quite a respectable volume. It was printed in London in 1866, and was reprinted in several languages. It created quite a sensation from the number of original, novel and valuable lessons which it taught. It also met with some sharp criticisms, and, perhaps, it was not entirely free from blemishes. But had he lived according to his expectations, he would have corrected all these in good time, as it is known he was engaged in re-writing it, and had already completed several new chapters and had revised others. Take it, however, as it stands, and with all its defects there has been no work published on uterine surgery with the last century that has been as full of original thought and invention, or that has contributed so largely to the advancement of gynecology as this book has done. I will not attempt to go into detail about his writings. Although I am somewhat familiar with them all, I have no list of them with me. Though his contributions have not been long, they have not been infrequent, and many valuable essays on different subjects have been furnished by him to the medical press of his day. It is not the length or the number of the books, however, which a man may write, but it is the originality and the value of the material with which he fills them which makes them desirable. His were all terse, original and eminently practical. His style was peculiar, it was altogether didactic, and it was his own.

I cannot, either, undertake in the short space of time allotted to occasions like this to go into detail in enumerating the number of instruments which he invented, or the operations or operative procedures which he devised or planned, but their number was immense, and shows how fertile of ingenuity was his brain, and how busily

and skilfully it must have worked. He does seem to be entitled to priority in the discovery of metallic sutures, but he was certainly entitled to great credit in their revival and the vast prominence which he gave them.

Dr. Sims' clients, especially in Europe, seem to have been people of great wealth, and from his acknowledged superiority in his special department he was able to command the largest fees, and yet he never became rich. He also had a proper appreciation of the value of his services, and usually demanded an adequate honorarium where his patient's purse could afford it; but when it came into his possession it seems that it was either lavishly spent or unwisely invested. (We are glad to learn, however, he left a competency for his family.) He was also a man of large charities. But it is unnecessary to dwell upon these minor points in his life. The day which made him great was the day when the idea of his first speculum first dawned upon him. That day when he first conceived the thought of throwing an abundance of light into the vagina and around the womb, and at the same time obtaining ample space to work and ply his instruments. This alone is enough to carry his fame down to the remotest ages, and his panegyrist will need no more brilliant facts than these on which to rest the immortality of his name. This instrument caused his name to flash over the medical world like a meteor in the night.

Gynecology to-day would not deserve the name of a separate and cultivated science but for the light which Sims' speculum and the principles involved in it has thrown upon it. It has been to diseases of the womb what the printing press is to civilization, what the compass is to the mariner, what steam is to navigation, what the telescope is to astronomy, and grander than the telescope because it was the work of one man. Those great philosophers, Galileo, Gregory, Herschel and Sir Isaac Newton, all claim and deserve successive parts of the telescope. Sims alone discovered his speculum, and like Minerva, from the brain of Jupiter, it sprang from his hands alone full fledged and perfect as when he gave it to the world. His work was so complete that it is said that no alteration or modifications which have since been made upon it up to this time have been regarded as improvements. The distinguished Dr. Emmet, of New York, who is peer to any living gynecologist, and whose reputation is world-wide, has been heard to say, within the last

few years, that so perfect was Sims' speculum and other instruments that he had never been able to improve upon one of them. No man can divide the honor of his speculum with him, and he deserves to be called the father of gynecology.

Thus, from starting amid the sloughs and swamps of Alabama, having for his patients the most humble in the land—often spending his nights by the bedside of the sick found in the slave huts of these localities—without family influence, poor, and with nothing to aid him, save a strong will and careful preparation combined with a devotion to purpose, he rose by the splendor of his own genius above all obstacles, and before he had reached the meridian of life, we find him one of the acknowledged discoverers and benefactors of the world, and ranking as one of the foremost men in his country. And a few years later we hear of him in all the great capitals of Europe, sometimes the guests and pet of Emperors, often receiving honors and distinctions from learned and enlightened scientific bodies, courted by the élite of his own profession, sought by the nobility, and receiving titles and decorations from courts representing and boasting the most splendid civilization the world has ever known.

I believe that before the next decade shall have buried those antagonisms, rivalries, and jealousies which often spring up around the paths of great discoverers, it will be the settled verdict of the medical men of the world, that Sims has lived to a greater purpose than any man in any age who has preceded him in his special department.

Gentlemen, there is one page in the life of this great man, one scene in the living panorama of which he constituted a part, that I would fain not disturb, and one on which I would prefer to drop the mantle of oblivion, were it not that it is already a matter of history, and perhaps it is due to the memory of Dr. Sims that I should refer to it.

I allude to the night when, as one of the surgeons, he last met the governors of the Woman's Hospital, and which closed forever his connection with that institution.

It is said that republics are ungrateful, and it therefore should not be surprising if even the governors of charitable institutions should sometimes forget their greatest benefactors, and smite the cheek of him whose hand was chiefly instrumental in calling them into existence. The Woman's Hospital was Dr. Sims' bantling. The crea-

tion of its germ and the conception of its possibilities was the outgrowth of those discoveries which emanated from his brain alone, and its final success was due to his untiring exertions. He was proud of his work; he was proud of the child of his own life, and when the Woman's Hospital was completed, he regarded it as the largest pearl in all its greatness—the central jewel in his crown of glory. But whilst it was the glory of his life, it was its humiliation too!

Those governors, who were in fact but little more than figure-heads, so far as the privileges and duties of the surgeons were concerned, had taken upon themselves the privilege of regulating the affairs of the operating room, and of saying to the surgeons that only fifteen guests or spectators should be permitted to be present at any one operation. Dr. Sims took this occasion for telling them he had not obeyed this order of theirs, and would not; and that if they insisted on enforcing this rule his resignation was at their disposal. He claimed the right to invite such members as his own judgment and inclination might dictate.

Their action assuming to restrict his privileges in this respect he regarded as without authority. To a man of honor their action must have been offensive.

It in effect accused him of being ignorant of the surgeon's duties in the sick room, and wanting in a proper regard for the feelings and sensibilities of his patients. All this made it insulting and galling to him, and especially as he knew it to be an unauthorized invasion of his own prerogatives, inherent to the office which he held, and altogether outside of their accredited duties.

All the world over, the creed of common courtesy which exists between the laity and profession makes the physician the autocrat of the sick chamber, and the privilege of the surgeon as to whom he will invite to his operating table or room has never before been restricted. If it was wrong to invite all who desired to attend, or all whom the surgeon might wish to witness his operation, why invite fifteen? It was not necessary to invite any! The hospital service afforded all necessary assistance. If it would not offend the sensibilities of a woman to have fifteen guests present, would it shock her modesty very greatly to have eighteen, or twenty, or fifty, or a hundred, or any number that the room could accommodate conveniently? Besides, it is well known that the patients in this hos-

pital are rarely ever seen by the spectators until after they have been placed upon the operating table, and under the influence of an anæsthetic when the table is rolled into position. And another even stronger reason exists against this restriction. To serve all the purposes in the interest of woman, for which this hospital was capable, it was doubtless intended or in contemplation by Dr. Sims from the first that it should be used as a school, so far as possible, for teaching physicians from the country, or city or other cities, or from other States or nations, who might temporarily be in New York for the purpose of studying that class of diseases, and would like to see these operations.

But suppose these governors could find nothing in all these facts to make them retrace their steps, could they find nothing in the fact that Dr. Sims thought they were in error and wished them to reconsider their unjust and unwise action? Could they not have conceded something to the opinions of the man who had created the hospital, who had devoted fifteen or twenty of the best years of his life to its service, who had passed many weary days and sleepless nights in the promotion of its interest, and had carried it upon his heart as none of them had ever done? They knew he had placed himself in a position in relation to the order which they had issued, from which he could not recede without loss of dignity or even honor; they knew he did not wish to sever his connection with the hospital, and they knew he did not wish his resignation accepted, and yet, with a heartless and cruel inflexibility, they refused to abolish their miserable order, and accepted his resignation; thus stabbing him in the most vital spot and mortifying him as nothing else had ever done.

In this difficulty Dr. Sims had the sympathy of a large portion of the medical men of America. And as an expression of their sentiments in this direction, the American Medical Association, at its very next meeting, unanimously elected him its President. He was elected in Louisville in 1875, and presided at the meeting held in Philadelphia the succeeding year, known as the "centennial session." This was the very highest honor which could have been paid him by the medical men of his own country. Whilst Dr. Sims in every way deserved this high compliment, and was himself an honor to the position, I yet have reason to know that he was selected at this particular time, over other distinguished aspirants, not only that they

might thus express their admiration of his exalted worth, but also in approval of the manly, dignified and honorable position which he had assumed and maintained in his controversy with the managers or governors of the Woman's Hospital.

When the names of these sickly, sentimental governors shall long since have passed away, with their foolish rules and regulations, and even their remotest connection with this hospital shall have been forgotten by the world, the name of Sims shall be known and read of all men as its great founder and patron, and emblazoned all over its walls, "from turret to foundation stone," as its ensign-armorial and shield to guard it against evil.

Now can posterity accept the imputation as true or just, that the man who had planned and schemed and worked, even in the midnight solitude of his office, that his life might finally achieve this good to women, be the one to be false to any of the proper delicacies or courtesies due to her sex. I will not pursue this subject further—it is not a pleasant one to dwell upon. He is now far beyond the cruel malice or petty jealousies of those who persecuted him, and the manhood which recognizes the great value of his life will see to it that his name does not suffer neglect in the grave.

Pardon me, gentlemen. for a little personal allusion to myself connected with Dr. Sims.

From the time when Dr. Sims located in Montgomery, up to the period when he left to cast his lot in the great city of New York, he was my warm and devoted friend, and my loved companion. He was open and confiding to his friends. I was proud of his confidence and affection, and gave him in return the full measure of my own. The act which I am about to refer to is known to but a few only of the older members of this Body, and is this: A few weeks or months after he had removed from Alabama to New York, a little misunderstanding grew up between us which resulted in our estrangement, and for many years afterwards all intercourse between us ceased. This has always been to me one of the bitterest episodes of my life, and memory never recalls the event without a feeling of sadness and regret. In this rupture I was probably more to blame than he, and I have no doubt that, had not our paths in life widely diverged at this time, the heartburning which our separation had caused to last for long years would have been forgiven and forgotten in a few days.

In 1868 I made a visit to New York, and whilst I was there he returned from a prolonged visit to Europe. The first time we met was at the opening of the Bellevue Medical College, when Dr. L. A. Sayre was to deliver the introductory address. We were each, without the knowledge of the other, invited to go on the rostrum, and were to meet in the faculty room to join the faculty for that purpose. I did not know that Dr. Sims was in the room, and at the time I entered he did not observe me, but soon I felt some one clasp me around the neck with both arms, and looking, I observed my long-lost friend Sims, who only said, "Baldwin, my old friend." We had no words of explanation, but from that moment all feeling of resentment left my heart, and again I loved him as a brother. Since then our intercourse by letter and otherwise has been constant, confidential and free.

I look back now upon my association with Him as one of the providences of my life, and his death as one of its bitterest affliction.



GLYCERIN-JELLY AS A CONSTITUENT OF SKIN REMEDIES.

"Glycerin-jelly is made by boiling together one part of gelatin and three or four of glycerin, until they form a translucent mass. Of this as much is taken at a time as may be called for by any prescription, and is dissolved by steaming. The medicinal ingredient, having meantime been finely rubbed up when requisite, with water or glycerin, is then added to the liquefied jelly, and the resulting compound well shaken until it becomes a tenacious fluid, which may be either moulded into tablets or poured into a vessel, the former mode of preservation being suitable for the soft the latter for the hard jellies.

The remedies best adapted to be used in this manner are divided into the two following classes:

1. All volatile agents (tar, carbolic acid, acetic acid, mercurial sublimate, iodine, iodoform, camphor, camphor-chloral, chrysarobin, ichthyol, the balsams, certain narcotic extracts.)

2. Those solid substances whose superficial action only is desired

(oxide of zinc, lithargyrum, alumina, acetate and carbonate of lead, iodide of lead, salicylic acid, sulphur, arsenic, pyrogallic acid.

“Jellies, with which medicines of the latter class are combined possess the decided advantage of exerting a less degree of pressure on the skin than is produced by collodion, so that never give rise to erosions, intertrigo, etc., and permit the complete and easy passage of the perspiration. This pressure has also a beneficial exsanguinating and absorbent action in many cases. Glycerin-jellies are soon found to be superior to the fatty ointments in two other respects—they cause but little soiling of the patients linen, and they cover the affected surface with a smooth artificial cuticle, which is desirable in all pruriginous complaints, in lichen ruber, etc, as reducing the friction of the clothing to a minimum.”

The precise constitution of these medicated jellies cannot be fixed, the combining proportions of their several ingredients must fluctuate. As these proportions cannot be carried in the memory—these tables are appended giving the medicinal proportions for hard and soft jellies admits of their being kept constantly in stock by druggists, and since so large a number of skin remedies can be compounded in this way, they can undoubtedly be used in conjunction with the other approved modes of application. It will be an interesting study to determine the nature of the cases in which they are practically of most service. Certain agents—as chrysarobin—and certain very mobile bodily parts—as the elbow and the palm of the hand, already seem excellently adapted to this kind of treatment. On the other hand, it is obvious that glycerin-jellies will never come to be so speedily incorporated as the fatty ointments, or so powerful in their effects as the rubber plaster, or so handy of application to less accessible region as the ether-spray. Yet, equally with the fatty ointments, they are superior to the other two methods, in extensive or universal skin affections.—*Unna und Biersdorf, Monat. f. Prakt. Dermatologie*, Vol. 11, No. 2.—*Journal Cutaneous and Syph. Dis.*, February, 1884.


[This is a valuable number of this *Journal* like many of its predecessors, and abounds in numerous practical matters in the department of skin diseases. Any of our readers will find it exceedingly helpful as a guide to the management of their difficult cases, and we advise them to try a subscription for a year.—ED.]

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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THE GOVERNMENT CONTROL OF THE UNITED STATES PHARMACOPŒIA.

A bill has been introduced into the House of Representatives, by Mr. Randall, of Pennsylvania, to prepare and publish a National Pharmacopœia. The chief of the Marine Hospital Service, of the Navy, and of the Army are each to detail two medical officers, and these offices are to invite the American Medical Association and the American Pharmaceutical Association, to form Committees of not more than three members, and thus constituted this board shall proceed to the work of forming a new Pharmacopœia, said Board having the power to add to its number from time to time as may in its judgment be necessary. Five thousand dollars are to be appropriated for carrying out the work.

No doubt this proposition will strike the profession in this country with surprise, more especially when the history of the Pharmacopœia is recalled. From the beginning the labor and expense of the production of this work has been undertaken and carried forward by

enterprise. The few men who have been interested in it have given their time and labor with an ardor which does credit to the two professions from which they came. Furthermore, they had the wisdom to keep this work alive by their desire to promote the best interest of the profession, and we are quite sure that none would have resisted quicker than they any movement, even by implication, which would have surrendered the work to the general government. This is more than ever inferrible when we remember, that in the early conventions the organization was completed before the officers of the army and navy were invited to take seats.

It will be surprising, therefore, to the profession, that there should have suddenly arisen an emergency which makes it now more necessary that "a national authoritative standard" should be undertaken by the Government.

The *Medical News* it seems is able to give a reason. In its issue of 9th February it says: "Unfortunately, since 1880 the United States Pharmacopœia has become a matter of commercial speculation. While a vast amount of intelligent and well directed labor was bestowed upon it by the Committee of Revision, taken as a whole it is by no means creditable to the science of the country and complaints as to its inaccuracy and the inconvenience of its methods have been numerous. Not only was it thus inferior to former revisions, but it was padded out into an absurdly large and clumsy volume, and supplied to the profession at an extravagant price wholly disproportionate to its former rate. That this departure from the time-honored course followed in former revisions should awaken, widespread dissatisfaction was inevitable; and it was to be anticipated that the dissatisfaction would lead the Government to supply a want which had always existed, but which had never before become so imperative as now."

Per contra, we consider it rather fortunate that the Committee has been able to produce a volume that could attain to any sort of a commercial dignity, instead of preparing revision after revision, that did not possess any. We cannot agree either that the revision was supplied at an extravagant price, for, had this been so the volume would not have been sought after so eagerly in the book market by such a large number of purchasers—a number far greater than for any previous edition however cheap. The medical and pharmaceutical professions were willing to pay the price asked for the work, just as they would for anything they thought worth the money.

As to the inferiority of the present revision as compared with previous ones, we will let the *British Medical Journal*, p. 700 (Oct. 1883) speak. The reviewer in that Journal has been comparing the *British Pharmacopœia*, the *German Pharmacopœia*, and the *United States Pharmacopœia* (1880) and says: "In comparing the three *Pharmacopœia*, it must at once be conceded that the *United States Pharmacopœia* is incomparably the best. The previous revision was very poor, but the present revision is a very great improvement on the last. It contains an enormous mass of information, which is, however, chiefly of use to the pharmacist. Nevertheless it contains almost every possible preparation which can be needed by the medical practitioner."

We think the *Medical News* will be greatly disappointed in not finding "professional approval" [of the proposed National Pharmacopœia] "practically unanimous." Not a large number of men are going to give the matter a thought, if we are to judge by the past. But of those who do actively consider the subject, we believe that very few will have such poor memories as to overlook the undesirable basis upon which, by the conditions of this bill, the national pharmacopœia would be founded. An expensive, and disappointing experiment has already been tried, by attempting to combine such incongruous bodies as the Army, Navy, and Marine Hospital Service, and the result was the wrecking of the National Board of Health, through the ambition of the Marine Hospital Service. With this disaster staring a confiding profession in the face, it is now proposed to reform the old combination, and to attach enough civilian experts to the Board to give it a general scientific character, and so avoid the suspicion of making it a purely government work.

We think when these facts are duly considered, if the profession of medicine and pharmacy are to have any voice in the matter, they will more nearly unanimously reject the proposition.

Another point. The whole movement as set forth first in the Randall Bill, and in the approving editorial of the *Medical News*, has too much of the color of rivalry between New York and Philadelphia not to be understood by non-residents of those favored cities. Some of the gentlemen of the latter city, have never been able to disguise their dissatisfaction at the departure of the Pharmacopœia from them, and we do not believe a word of complaint against the scientific part of the present revision of the Pharmacopœia would

have been sounded, had the business management been to the liking of the complainants.

But we assert, even if the proposed plan is excellent in every respect, there is no reason why a new Pharmacopœia should be compiled at an earlier date than 1890. We are willing to take the opinion of the *British Medical Journal* upon this subject, and repeat that the U. S. Pharmacopœia is incomparably the best in any language, and a wise Congress will not willingly interrupt the course of a scientific body, pursuing its works zealously and honestly, and at its *own expense*.



TREATMENT OF ECZEMA MARGINATUM (TRICOPHYTOSIS) AND RINGWORM IN GENERAL.

In the February number of the *Journal of Cutaneous and Venereal Diseases*, Dr. R. W. Taylor gives some experience in the use of bichloride mercury in the treatment of eczema marginatum and other ringworms. He first tried a four-grain-to-the-ounce alcoholic solution of bichloride of mercury, and when dry paint the whole surface with tincture of myrrh. He then made a prescription containing 4 gr. bichloride mercury to an ounce of tincture of myrrh, with the direction, to thoroughly paint the parts twice a day. The effect was simply wonderful. In a few days, the patches and rings became less red, the papules less salient, the pruritus was relieved, and, within a fortnight, the disease was wholly cured. He afterwards used the simple and compound tinctures of benzoin as a vehicle for the bichloride "affording a vehicle for the parasiticide and a protective film to the integument. The discomfort of these applications is very slight, patient's simply complain of a little drawing or tight sensations of the parts, for a few moments after the application—inconveniences which are more than counterbalanced by the relief of the pruritus.

REVIEWS AND BOOK NOTICES.

THE PATHOLOGY AND TREATMENT OF VENEREAL DISEASES. By FREEMAN J. BUMSTEAD, M.D., LL.D, and ROBERT W. TAYLOR, A.M., M.D. Henry C. Lea's Son & Co. 1883. Pp. 906.

It would be small praise to say that this is the best work on venereal diseases in the English language. It is the only complete work on the subject, which has been brought down to the advanced stage of our knowledge. Few specialists, and fewer general practitioners have been willing to do without this volume, even those of a generation now fast reaching the climax and who were strongly wedded to Ricord. Those readers who only knew the first edition, will hardly be able to realize how great a work it has become, and how vastly it has improved, without running through the numerous new pages. Illustrations abound even to the addition of two pages of chromo-lithographs.

The subject of syphilis—indeed of all venereal diseases is the branch with which the young practitioner has to make the earliest acquaintance. It is safe to say that no class of diseases enters so largely into, and modify so extensively, all the diseases of the human family as syphilis. To know this one disease correctly, is to know all the possible manifestation of all diseases. To be able to say here is a syphilitic complication and there is none, is to be possessed of knowledge of a most complex and voluminous character. This difficulty early impresses itself upon the young physician, and he looks in vain for guidance in the general treatises on surgery.

To determine the nature of a syphilide, for instance, so as to satisfy himself and cure his patient, he would necessarily be compelled to search through libraries by far more complete than most young men have the good fortune to possess.

Fortunately we have in Bumstead and Taylor's work, a very complete treatise. Few things could occur to the perplexed doctor, upon which he desired information, that could not be found here. All the favorite prescriptions for gonorrhœa from Chapman's mixture to injection Bru.

All the knotty points in the stricture discussion are dealt with, and with such a conservative and honest pen, that the Otis doctrine of normal measurements need no longer puzzle the novice, whose

imagination may have been inflamed by the sight of the ponderous polished plungers designed for the urethra. We observe that the Hot Springs of Arkansas by an almost iconoclastic dash of the pen has been swept from its proud position as a "sure-cure" place for syphilitics. The authors think that the rich patient may be counselled to visit the Hot Springs, but the man of moderate means had better be told that he can do as well at home under proper treatment.

The bibliographical references in the foot notes are ample, and the index is quite complete, so that the student who has learned the not very wide-spread art of reading, will easily work his way into the riches of a literature which, loathsome as it may seem to some, abounds in unending interest.

THE FIELD OF DISEASE. A BOOK OF PREVENTIVE MEDICINE.

By BENJAMIN WARD RICHARDSON, M.D., LL.D., F.R.S. Philadelphia: Henry C. Lea's Son & Co. 1884. Pp. 737. Cloth, \$4.

We have here a volume on preventive medicine upon a plan entirely different from that of any similar treatise. The author sets forth in a chapter, the preventive scheme of medicine, the outline of the work, in which, in the very outset, he succeeds in interesting the reader. We make some quotations:

* * "The study of prevention and cure proceed well together, and he is the most perfect sanitarian, and he is the most accomplished and useful physician, who knows most both of the prevention of disease and of the nature and treatment of disease; he who knows, in fact, the before and the after of each striking phenomenon of disease that is presented for his observation." He considers that the grand work of this era is "to reconcile the two different schools, (of cure and prevention) to systematize the preventive part of medical science, so far as that is now known; to bring the preventive part into entire accord with the remedial; to let the world at large understand the interrelationships which exist between the two parts, and, by a sympathy of action, based on knowledge, to enable every man and woman to assist in that which tends towards prevention."

It must be understood that the author has "written this work for those members of the intelligent reading public who, without desiring to trench on the province of the Physician and Surgeon, or to dabble in the science and art of medical treatment of disease, wish

to know the leading facts about the diseases of the human family, their causes and prevention."

In the general outline of disease which occupies the first chapter, he says: "so we must start with the great fact in our minds, a fact we may after use for whatever necessary purpose we may be at in illustrating prevention, that there are, in detail, before the scholar of the preventive art one thousand one hundred and forty diseases affecting mankind which he has to study with a view to their abatement or removal." He then proceeds to point out the conditions of diseases, explaining the meaning of "fever," "irritation," "catarrh," "inflammation," "gangrene," "congestion," "extravasation," etc., then analyzes the groups of disease as given in the "Nomenclature of the Royal College of Physicians."

As an introduction to seats of local diseases, he gives as a physiological outline, conceiving the idea or looking at the processes in the living body as one can look into the mechanism of a watch. The description is a vivid narration, which if told before a class of intelligent young men and women, would certainly convince them "that we are fearfully and wonderfully made" and more than this give them an adequate idea of the complexity of a machine they so often neglect and abuse.

Dr. Richardson has produced a work which ought to become popular, and the instruction he has here brought together in this portly volume is just the sort of material, the lack of which among the people, is such a detriment to the promulgation of sound hygienic principles, that many earnest sanitarians have almost abandoned the hope of seeing the work grow beyond the influence of a few paid officers, a very small number indiscreet "reformers," (male and female) and a small wing of the medical profession. A book, therefore, that promises to influence the general reader in such a way as to make him an earnest and intelligent seeker after the causes of sickness, will be welcomed by sanitarians everywhere, as it cannot fail to break up much new ground and make it fit for a higher degree of cultivation.

CURRENT LITERATURE.

THE RUMFORD MEDALLIST.

The *Nation* (February 7th, 1884) gives an interesting account of what the Rumford Medal is, and why it was given to Prof. Henry A. Rowland, of the Johns Hopkins University, and from it we extract the following items:

Nearly ninety years ago that learned, humane, versatile foresighted philosopher, who began his life as Benjamin Thompson, of New Hampshire, and ended it as Count Rumford, of Bavaria, conveyed \$5,000 to the American Academy, of Boston, the income of which should be given every second year in premiums for important discoveries or useful improvements which might be published (within two years previous) on heat or on light.

It was not until 1839 that the first Rumford Medal was bestowed on Dr. Robert Hare, of Philadelphia, for the invention of the compound blowpipe. There was an interval then of thirty-three years, when the second medal was bestowed on Ericsson for his caloric engine; in 1865 to Prof. Treadwell, of Harvard, "for improvements in the management of heat; in 1867 to Alvan Clark, for improvements in the steam engine; at a late day to John W. Draper, for his discoveries in the theory of light; and the latest award prior to the current year to Prof. Gibbs, of Yale College, for researches in thermo-dynamics."

The medal has been awarded to Prof. Rowland for his improvements in machinery, whereby "the admirable ruled surfaces, or "diffraction gratings," as they are commonly called, which were first made by Mr. Rutherford, of New York, for spectrum analysis. Mr. Rowland conceived the idea of improving these gratings, partly by making the surface on which they are ruled concave, and partly by a new and better method of ruling. He devised a new method of making the screw which guides the cutting diamond, and devised the whole dividing engine so as to obtain the highest accuracy. In both particulars he was successful. The machine looked so perfectly when it was first mounted for a trial, that it has never been taken down, but has steadily by day and by night, pursued its accurate course. He did not rest here. He mounted his own

gratings in a spectroscope of original construction, in a room fitted up as a camera obscura, and there for two years past he has been making a photograph of the spectrum on a scale never before attempted.

The scene of Prof. Rowland's activity is a small "back-building" (as they call it in Baltimore), fitted up as a mechanic's shop, in Howard street near the University. Nothing could be humbler than these unpretentious laboratories; but hither have come pilgrims from this and other lands—Cayley, Spencer, Sylvester, Carpenter, Newcomb, Hall, Young, Dangle, Trowbridge, Draper, and many more, to watch with their own eyes the marvellous furrows of the little diamond plough, to wonder at the hues of the spectrum revealed by the grating, and to see the mysterious multitudes of lines which may be counted on the photographic plates.



IS THE EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

Dr. A. Reeves Jackson in a reprinted article from *Gynecology Transactions* on the above subject gives the following summary :

1. Diagnosis of uterine cancer cannot be made sufficiently early to insure its complete removal by extirpation of the uterus.

1. When the diagnosis can be established, there is no reasonable hope of a radical cure; and other methods of treatment far less dangerous than excision of the entire organ are equally effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life.

3. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering—except in those whom it kills—nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern surgery.

THE PLACE OF PANCREATIN IN THERAPEUTICS.

Dr. J. S. Hawley, of Brooklyn, contributes to the *New York Medical Record*, of October 13th, the following useful remarks on a popular method of treatment.

The great importance attached to the nutrition of the sick, in modern medicine, has naturally and very reasonably led to the administration of digestive ferments to aid in the preliminary act of digestion, and also to the adoption of many devices for conforming alimentary substances to the impaired digestive functions, which attend all acute and most chronic diseases. This impulse has been so potent as to force the pendulum of medical opinion and practice far beyond the point of equilibrium, and which at the present time seems to oscillate between the extremes of scepticism on the one hand, and an easy credulity on the other. The part which pancreatin is now playing in this important field of therapeutics, the wide range of its digestive activities, and the extraordinary attention which has been directed to its use by the late Lumleian lectures by Dr. Roberts, are sufficient reasons for inquiring into its proper use. It is by no means uncommon for men even of genius and learning, who have been fortunate or wise enough to make a step forward in the treatment of disease or the amelioration of human maladies, to be carried by their enthusiasm and the exaltation which attends success to attribute to their discoveries or improvements an extent of application which subsequent observation shows to be unwarranted. This remark is well illustrated in the title given by Corvisart to the first pamphlet issued by him on the use of pepsine, *Dyspepsie et Consomption*. The very great control over the processes of digestion and untrition which his discovery of the use of pepsin afforded, impressed him with the belief that its influence would be sufficient to arrest the ravages of consumption.

The question to be discussed is not as to the relative value of different digestive ferments, but, admitting the value of all, to determine what is the rational and effective mode of using pancreatin. The proposition submitted, and an attempt to prove which will be made, is, that pancreatin cannot be effectively or usefully administered by the stomach, but can only be employed for modifying foods before they are taken. The argument will be presented in relation to the anatomical, physiological, and experimental aspects of the subject.

When we examine the anatomical arrangement of the alimentary canal, and the order in which the digestive ferments are delivered to and brought into contact with the ingested food, we are struck with this peculiarity, that they are generated and delivered at points remote from each other. Comparatively recent demonstrations have shown that the pancreatic fluid possesses three distinct ferments, viz., amylolytic, proteolytic, and emulsifying. Now, it would seem to be a fair deduction and sound reasoning to conclude that if the pancreatic fluid could effectively perform these several offices upon crude food, then the salivary and gastric secretions were useless and in excess of any want of the system. But their presence is proof of their necessity, and the existence of ferments lower down in the alimentary canal, supplementary to them, is proof that their action is preliminary, and the fact that their offices are performed, where the next lower ferment cannot reach them is proof of their incompatibility. So much may be concluded by *a priori* reasoning from the anatomical arrangement. The physiological aspect of the case will be found in harmony with and confirmatory of the above. The gastric juice is not only known to be acid, but its ferment, pepsin, is inert in any other than an acid medium, while the pancreatic fluid is alkaline and is inactive in any other vehicle. This one physiological fact is sufficient to show that the two ferments cannot act together. One other physiological fact goes to establish the same conclusion, that is, the destruction of the pepsin in the duodenum by the action of the bile. Hermann (*Elements of Human Physiology*, p. 174), speaking of intestinal digestion, says: "Solution of albuminous bodies is effected, most probably, by the pancreatic juices, as the activity of the gastric juice which reaches the intestine is destroyed by the bile." Dr. Lucien Corvisart, speaking of the pancreatic digestion (Braithwaite's *Retrospect*, No. xxxix), says: "When the gastric acid and pancreatic juices are separated they act in succession, and thus the peptone may be doubled; but when mixed, the action of each is checked—they neutralize each other. Nature prevents this conflict, first, by separating the two juices by the pylorus; second, by the bile, which destroys the pepsin, as shown by Poppenheim." Certainly the demonstrated fact that the activity of the pepsin is arrested in the duodenum, not only by the alkalinity of its fluids, but by the direct agency of the bile, is fairly conclusive evidence of the incompatibility of the two agents which meet these.

But the question still remains. Can pancreatin pass through the stomach, come out unimpaired, and in the duodenum take up its office and play the same part as freshly secreted pancreatic juice? In other words, can pancreatin be usefully employed by administration by the mouth?

The extensive use of remedies in which pepsin and pancreatin are combined, implies a belief on the part of many physicians that pancreatin can survive the action of the gastric juice and pass on unharmed into the duodenum, where it is free to perform its office. So far from this being the case, however, there are many reasons for believing that pancreatin is digested in the stomach like any other proteid. Lehman says: "The principle constituent of the pancreatic juice is a substance resembling albumen or casein." Herman (*Elements of Human Physiology*, p. 142) says: "Its specific constituents are several albuminous bodies, which are scarcely distinguishable from albumen itself, and to which many observers ascribe the ferment action" (pancreatin). Now, it is difficult to understand why a substance of the nature of albumen or casein should not be digested by pepsin, whose sole object and use is to digest albuminoids, and whose ability to digest that whole range of substances is well known. But the determination of this point does not rest upon inference. It has been shown by Kühne that "pepsin in acid solution actually destroys trypsin (one of the constituents of pancreatin); trypsin in alkaline solution does not possess the converse power of destroying pepsin, which, however, is altogether inactive in alkaline fluid."

Mr. E. Scheffer, of Louisville, has demonstrated, by careful experiments, the fact that pancreatin digested with pepsin loses its activity in respect to all its properties. From a number of experiments, ingeniously contrived for the purpose of demonstrating this want of space will permit quoting only two. First: "To a solution of one-half grain of pepsin, in two ounces of acidulated water, was added two ounces of pancreas liquid, obtained by rubbing down and beating three ounces of chopped pancreas with small quantities of water, until, after three strainings, four ounces of liquid were obtained, which readily saccharified starch at the temperature of the air. The pepsin-solution containing the pancreas liquid, after four hours digestion, was filtered, neutralized, digested with starch paste, and tested, but no sugar-action was obtained." Second, "To two

ounces of pancreas-extraction was added a solution of one-fourth grain of pepsin in two drachms of water, acidulated with five drops of hydrochloric acid, and the mixture treated as described before. Neither from the acid nor from the neutralized solution, after digestion with starch-paste, did I obtain any sign of sugar by Trommer's test; while the pancreas extraction, by itself treated with starch, had given the most copious precipitate of oxidulated copper."

To the same effect are the following experiments made by Dr. William Roberts, of Manchester, *Lumleian Lectures*, page 36), for the express purpose of determining the question under discussion:

"I prepared a solution of lactic acid, corresponding in saturating power to the normal gastric acid (2 per 1,000 of hydrochloric acid). To fifty cubic centimetres of a solution of pepsin, and five cubic centimetres of an active extract of pancreas. I prepared a second similar, but substituted filtered saliva for the pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period, the solutions were exactly neutralized and tested; they were both found to be absolutely inert, not a vestige of amylolytic nor proteolytic power had escaped destruction.

"I had an opportunity of testing the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution was obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion, five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture placed in the warm chamber for one hour; at the end of that time it was exactly neutralized, and divided into equal portions. One portion was tested with a drop of starch-mucilage, and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk, rendered slightly alkaline with carbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

"With this evidence before me, I am unable to accept the con-

clusions of Defresne and others in Paris, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion, and who recommend the administration by the mouth of pancreatic preparations during the period of chymification."

It appears then that the evidence afforded by the anatomical distribution of the digestive fluids, by the physiological constitution of these juices, as well as the conditions under which they perform their functions, and the results of experimental inquiry, all point to the conclusion that pancreatin not only cannot act in the presence of the gastric juice, but is deprived, by gastric digestion, of all power to perform its functions.

There remains one more aspect of the question to be considered, viz.: Can pancreatic preparations, by any device, be protected from the action of the gastric juice in their passage through the stomach, in such manner as to preserve their digestive potency intact until they arrive in the duodenum, where the conditions are favorable for their action?

Dr. Fothergill proposes to accomplish this by administering ten or fifteen grains of bicarbonate of soda with a dose of liquor pancreatics at the tail of the digestive act. This passes it securely through the stomach, just as a guard of soldiers sees a merchant convoyed over an unsettled frontier infested by robbers." Theoretically considered, this expedient is open to several objections.

First, the alkali and the liquor pancreaticus are commingled, hence the pancreaticus is as much exposed to the attack as the alkali; as, if the soldiers who were sent to guard a company of merchants should mix indiscriminately with their unarmed charge, an attack upon this promiscuous assembly would be as likely to prove as damaging to the guarded as to the guards. If the alkali could be made in some way to surround the pancreatin, so that the acid gastric juice could be neutralized before the pancreatin became exposed, more certainty would attend the device.

Second, it must not be forgotten that ingesta of no kind pass directly through the stomach. It is the nature and office of the stomach to retain its contents, and to pour out gastric juice upon them. Under these circumstances, how long would ten or fifteen grains of alkali resist the acid of the stomach? It is proposed to give the alkali and pancreatin an hour and a half or two hours after

the ingestion of a meal, at "the tail of the digestive act." Does not the digestive act continue from four to six hours? Can "the tail of the digestive act" be determined? Does not every fresh ingestion provoke a fresh discharge of gastric juice? Certainly, such a procedure, to say the least must be subject to very great uncertainties. The stomach is well called an "acid gulf," "which we have to guard against, else our artificial pancreatic secretion is useless, of no earthly avail." It seems more probable that this "acid gulf" would swallow up any adventurous pancreatin which should attempt to cross it, than that the rash adventurer should cross it in safety. But theory aside, it is claimed that clinical experience justifies the conclusion. It, however, should not be forgotten that clinical experience is invoked in defence of the use of pancreatin, not only unguarded by an alkali, but actually in combination with acidulated pepsin, which both Dr. Roberts and Dr. Fothergill assert to be fatal to pancreatin. The whole course of therapeutics is strewn with the wrecks of remedies which have been foisted upon the profession by the supposed results of clinical observation. Perhaps nothing is more delusive than a fragmentary and ill-digested collection of clinical facts. The sources of error are too numerous, and the conditions too complicated, to allow clinical observations to determine any important conclusion until many facts, well observed and carefully collated, have been brought to bear on the question. More especially must this be the case when the clinical observations contravene what are supposed to be well demonstrated scientific facts, as in the case under consideration. Science will be of little avail in promoting the advancement of the medical art, if facts established by research and observations short of absolute certainty. It seems far more reasonable to conclude that clinical experience will, in the end, conform to scientific demonstrations.

But whichever way the progress of observation and experience may determine this question, pancreatin has before it a wide therapeutic field. Second only in importance to the promotion of the digestive act within the organism is the adaptation of foods to the conditions of disease. The whole subject of the nutrition of the sick may be influenced by the use of this agent. The patent fact that the stomach, in common with all other organs of the body, is impaired by all acute and many chronic diseases, affords a wide scope for the use of artificially digested foods ; but more especially

in pancreatin likely to revolutionize the vexed question of infant-feeding.

The principal obstacle to the successful administration of cow's milk is alleged to be the density of the coagulum formed by the action of the acids of the stomach upon the casein of the milk, thereby preventing its proper digestion. The devices for overcoming this difficulty have been numerous, but none of them entirely satisfactory. The use of pancreatin-preparations appears to meet this difficulty fully. Dr. Roberts (Lumleian Lectures) ascertained by many experiments that pancreatin acts with great rapidity upon the casein of milk, and if not fully peptonizing it, certainly rendering it non-coagulable by heat or acids. This would seem to leave little to be desired in the matter of the adaptation of cow's milk to the purposes of infant-feeding. In the case of feeding infants upon farinaceous substances containing a large preponderance of starch, as they all do, the objection to their use is deemed to lie in the inability of very young infants to saccharify starch, either by the action of the salivary or pancreatic secretions. This inability to digest starch has been attributed to the non-development of the salivary and pancreatic functions, which, it is alleged, has been physiologically demonstrated. But over and above any demonstrations, such inability might well be inferred from the fact that infants are constituted to receive, and the Creator has provided for their use, a food which requires the action of neither salivary nor pancreatic digestion. The salivary secretion, being only diastasic, finds nothing in the milk to act upon. The gastric juice is amply sufficient to digest the casein; and as to the fat in the milk, it does not require the action of the pancreatic juice, for all nascent milk is in a perfect state of emulsification. So it appears that the infant is fully able to digest milk through the action of the stomach alone, and we may fairly infer that functions would not be provided for before there was need for their employment. This amylaceous apepsia of infants has been met by numberless devices, as is attested by the legion of infant's foods, which, by methods more or less effective, have been devised to overcome it. The most complete as well as the most scientific of these methods is that known as Liebig's which consists in saccharifying the starch by the action of the diastase in malt. This is an expensive and somewhat difficult process, so much so as to be unsuccessful in the hands of the average

mother or nurse, and has consequently fallen into the control of manufacturers. But, by the use of artificial pancreatic preparations, this conversion of starch is accomplished with the minimum of trouble and skill. It consists simply in adding to the cooked food, at blood-heat, the pancreatic liquid and allowing it to stand in a warm place one hour. A process so simple and so effective certainly seems likely to banish many of the infant-foods which are now urged upon the attention of mothers and physicians.

The question, "What is the place of pancreatin in therapeutics?" may, in view of the facts set forth above, be confidently answered, not as a remedy to be administered internally, but as an agent for adapting foods to the impaired digestive functions of the sick, and especially to the preparation of cow's milk and farinaceous foods for infant-feeding.—*British Medical Journal*.

NON-VESICATING CROTON OIL.

An important discovery seems to have been made by Mr. Harold Senier, of the London Chemical Society, to judge from an abstract given in a recent number of the *Lancet* of a paper read by him at a meeting of the Pharmaceutical Society. It amounts to nothing less than that croton-oil may be separated into two different oils by the action of alcohol, one of which is irritating but not purgative, and the other purgative but not irritating. When alcohol of the specific gravity of 0.794 to 0.800 is added to the croton oil in the proportion of seven or more volumes to six, the oil separates into two parts—one of them (the vesicating oil) dissolves in the alcohol, and remains soluble in alcohol in all proportions; the other, (the purgative oil) separates, and is then found to have become insoluble in any proportion of alcohol. This insoluble oil is said to be a safe and pleasant purgative, free from any undesirable action, in doses of one-tenth to one-half a minim, in the form of pills made with magnesium carbonate and extract of henbane as excipients.—*N. Y. Medical Journal*.

COMBINATION OF SKIN AND SPONGE-GRAFTING.

Dr. Fred. B. Robinson, of Grand Rapids, Wis., sends us the following instructive history: "M. B——, a healthy girl, aged six years, became severely burned on the nates, vulva and both thighs. In all about one hundred and eighty square inches of skin were burned off. The shock was very severe. The urinary secretion was suppressed for two days, but was finally restored. Exudation from the surface was profuse and exhausting. Dressing was required three times a day for some time. Flour, oils, etc., were employed to exclude the atmosphere from the raw surface, but under all medicaments the child waned from extensive suppuration. It became a question of active treatment or death. A combination of skin- and sponge-grafting was resorted to. Pasteboard boxes were applied so as to keep all material, cloths, etc., from the burned parts, as all bandages caused excessive suppuration by irritation. The burned surfaces were made as bare and free as possible. Fine sponges were soaked in alcohol and carbolic acid (200 to 20 parts) for thirty-six hours. Thin layers were cut from the outside of the sponge, and these were applied on the burned surface. The thickness of the sponge-layers best adapted is about that of blotting-paper, so that the granulations can grow up in the meshes of the sponge, absorbing it as they grow. The sponge- and skin-grafting was done from the edge of the denuded surface. Every three weeks I clipped some forty skin-grafts from my arm or leg, and applied them to the surface and covered them with the layers of prepared sponges. After this application suppuration would be partially suppressed, followed by a rise of temperature for a few subsequent days. Whenever the child lost weight the healing was stationary. Under this method healing was marvellous. The granulations would spring up between the meshes of the sponges, and the skin-grafts furnished new base-points of skin growth. Newly formed skin would soon extend beyond the application, leaving some of the thicker nodules of the sponges unabsorbed. No bandages were placed on the sponges, as the parts were at rest and fairly quiet. The subnitrate of bismuth was sprinkled on the burned surface, which very much diminished suppuration and odor, and kindly promoted healing. The wounds are almost healed at writing. I think such combination will be found a useful method in healing extensively skin denuded surfaces and ulcers."—*N. Y. Med. Record.*

TREATMENT OF DIPHTHERIA WITH OIL OF TURPENTINE.

Dr. Satlow (*Yahrb. für Kinderheilk.*, Band xx., Heft 1,) after employing all the usual methods of treatment with varying success, has since March, 1881, confined himself to turpentine. His experience with it extends to forty-three cases, including eight adults. Of these, only one died. This was a feeble boy, five years of age, who, after the local symptoms disappeared, suddenly succumbed on the sixteenth day of the disease to paralysis of the heart. The following were the complications: In three cases, extension to the larynx; in three, to the nose; in one, persistent albuminuria; in six, transient albuminuria; in one, hæmaturia (in a delicate woman after one ounce of turpentine, and lasting two days,) in four, paralysis of the palate. Transient strangury was common. Unless the case appeared grave from other, the turpentine was withdrawn as soon as any renal complication showed itself, and recovery quickly followed without any œdema. Three cases of diphtheritic laryngitis recovered without tracheotomy. The author thinks it only fair to add that, in addition to this internal treatment, he prescribed, chiefly in deference to public opinion, cold compresses (with, when the temperature was very high, packing,) and gargles of chlorate of potash or lime water. The turpentine, which should be fresh distilled, was given to adults, in doses of a tablespoonful twice daily. Children, under fifteen years, received a teaspoonful, followed in both cases by a copious draught of milk. Where vomiting was produced, five to fifteen minims of sulphuric ether were added. Small doses were found useless.—*London Medical Record*.

ST. LOUIS, August 25th, 1882.

The concentrated extract of *Pinus Canadensis* has established for itself the most unqualified commendation as an astringent, and it scarcely requires any further affirmation on my part.

LOUIS BAUER, M.D., M.R.C.S. Engl.

Professor of Surgery in and Dean of College of Physicians and Surgeons, St. Louis, Mo.

ARTIFICIAL CULTIVATION OF VACCINE VIRUS.

Dr. C. Quist, a physician of Helsingfors, Russia, announces in the *St. Petersburger Medicinische Wochenschrift*, that he has discovered a method by which vaccine virus can be cultivated in the laboratory. His claim, if true, would render vaccine farms superfluous, since all our virus should be grown in a watch-glass. It will, therefore, be examined with much interest.

Dr. Quist, by cultivating the micrococci of the vaccine lymph found that they developed into bacilli, which in turn produced micrococci again. After many experiments he found that the two things necessary for growth were oxygen and a proper culture fluid. The vaccine bacterium is, he says, "an exquisite ærobium." The best culture-fluid he found to be egg or serum albumen, to which is added glycerine (to prevent desiccation) and a little carbonate of lime. The following is one of the several formulæ which were used:

R.

Blood serum, 1 part.

Glycerine, 1 part.

Aquæ destill, 1 part.

Calcii carbonat, 1-900th part.

This fluid is sterilized by keeping it at a temperature of 60° C. It is then spread upon a glass plate, a drop of vaccine lymph is mixed with it, and the whole is covered with a glass bell. The preparation is thus kept for a number of days. In six to ten days the surface is covered with the vaccine organisms. A little of this can be removed and inoculated with the result, according to Dr. Quist, of producing a perfect vaccine pustule. Our experimenter has found, also, that one inoculation of this cultivated virus produces immunity against a second. He does not, however, yet give evidence to show that these inoculations prevent small-pox.

It appears from reading the account of Quist's experiments that they were carefully conducted. The obvious criticism, however, is that they may only show that vaccine lymph can be largely diluted and yet retain its potency.—*N. Y. Med. Record*.

NOTES.

A CASE OF SPONTANEOUS COW-POX is said to have occurred in the Department of the Gironde, France. The lymph has been collected and inoculated.

Who is not heartily tired of the miserable contention going on between rival medical colleges in Louisville. We will reserve our judgment as to who is right, by the standing the graduates of these colleges take before the North Carolina Board of Examiners.

THE MEDICAL SOCIETY OF NORTH CAROLINA will hold its Annual Meeting in Raleigh on the 20th May. It is expected that the meeting will be a large one, as it will be a very important one, a new Board of Medical Examiners will be elected to serve the ensuing seven years.

HYPERICUM OIL (oil of St. John's Wort) is another old remedy revived, reputed as a beneficial application in bed-sores. *Hypericum medium perforatum* is the species referred to. According to the U. S. Dispensatory the oil of this plant is made by macerating the flowering heads in olive oil, and under the name of red oil it is employed as a domestic remedy for bruises.

"NORTH CAROLINA PHOSPHATES" is the title of an interesting pamphlet from the pen of Dr. W. B. Phillips, Chemist of the Navassa Guano Company, of Wilmington, setting forth the commercial value of the phosphates found in New Hanover, Pender, Duplin and Sampson Counties. We commend the subject to the attention of our farmer friends and others interested.

QUEBRACHO in the form of fluid extract, is a very valuable remedy in angina pectoris. Given during a paroxysm, in those cases in which morphia is given hypodermically for the relief of pain, quebracho antagonizes the narcotic effects of the former drug, causes a free expectoration, and gives the patient the ability for deeper respirations. The dose is from 15 to 60 drops every two hours until free expectoration ensues, or nausea supervenes.

ST. LOUIS, August 25th, 1882.

Surgical practice does not frequently proffer the opportunity of employing nervo-tonic remedies, and therefore I am perhaps not competent to fully judge the therapeutic virtues of CELERINA, a compound lately introduced by J. C. Richardson, Esq., of this city. I have, however, used it, and with very satisfactory results, in at least twenty appropriate cases, and feel persuaded that it develops most happy actions, and that it deserves the attention of medical practitioners, more especially of those employed in the treatment of nervous afflictions. I shall certainly continue to test it more fully, and report my observation in due time.

LOUIS BAUER, M.D., M.R.C.S. Engl.

Professor of Surgery in and Dean of College of Physicians and Surgeons, St. Louis, Mo.

TONGALINE.—“ We wish to call the attention of our readers to this new remedy for neuralgia and rheumatism. Having a case of neuralgia recently which did not improve under the ordinary treatment, we had Messrs. Bush & Co., order some Tongaline for us, which we gave to our patient. It acted admirably, relieving the pain before many doses had been taken. Since then we have had occasion to prescribe it several times and with the same good results.

“ We believe Tongaline is destined to become ‘the’ remedy for neuralgia, and the testimonials from noted physicians and surgeons surely tend to strengthen such a prediction. Try Tongaline and you will thank us for the suggestion.”—*Extract from the January ('84) number of the Eastern Medical Journal, Worcester, Mass.*

TRICHINOSIS AND ADULTERATED LIQUORS.—Congress is considering as a retaliatory measure for the restrictive legislation against the importation of American pork in France, Germany, and Italy, the exclusion of adulterated *liqueurs*, *brandy*, *schnapps*, and *olive oil*. The dangers from trichinosis may then grow less in the eyes of European politicians. But what would American politicians and other bibulous people do without Celte wines and brandy, and peanut oil with a gilded olive oil label on it?

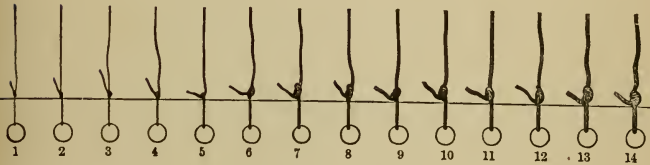
THE SIMS MEMORIAL FUND.—It would be gratifying if the fund now being raised as a suitable memorial for Dr. Sims were contributed by the the entire profession in the State. It is not desirable that the amounts should be large, but that the contributions should come from every one of the ninety-six counties.

Dr. A. W. Knox, of Raleigh, has been designated as the member of the Sims Fund Committee for this State. He is sending out blank subscription lists to each county, and we trust that the responses will be prompt.

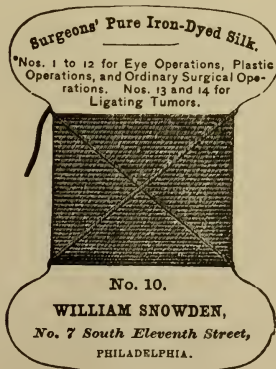
The Couveuse for children is described in the *Medical Abstract* for January, 1884, with illustrative engravings. This nursing-box for children was introduced by M. Tarnier into the Maternité Hospital, in 1881. It is divided into two compartments. The lower is a receptacle for hot-water, with a thermo-syphon attachment to heat the water. The upper compartment contains the basket bed for the infant, and is enclosed above by a moveable glass cover. The whole is an ingenious novelty but little likely to take hold upon the generations of mothers in the Southern States, judging by their ability to nestle an unlimited number at the "maternal font;" in fact it is hard to look upon such a contrivance seriously from our standpoint.

THE USE OF THE MENTHOL CONE.—Dr. D. Cammann, of this city, writes: "The notes on the use of the menthol cone by Dr. Wendt, in a recent issue of the *Medical Record*, remind me that since my article of April 28, 1883, I have used menthol in cases of toothache with favorable results. A few of the crystals are scattered between two layers of raw cotton and applied over the seat of pain. A burning sensation is soon experienced, but no bad result has followed its application directly to the mucous membrane. Its use in this direction may, I think, be extended in the future, and its application to the throat in solution and in the form of spray will, no doubt be attended with beneficial results in many cases. Several physicians have reported to me favorable results from its use in the past few months. The list of drugs useful for the relief of pain by local application is not so large that we can afford to let a good thing like menthol hide its light under a bushel and lie idle on the shelf."—*N. Y. Medical Record*.

CHLOROFORM AND AIR AS A NEW ANESTHETIC.—M. Paul Bert has communicated to the French Academy of Sciences the discovery that a mixture of 8 grammes of chloroform volatilized in 100 litres of air, has several advantages over ordinary surgeon. The *British Medical Journal* calls attention of its readers to the fact that Mr. J. F. Clover, 25 years ago made the same discovery. Chloroform has not been in favor in London for nine or ten years past.



WILLIAM SNOWDEN,
Philadelphia.



The dividing line established according to law, between The North Carolina Insane Asylum at Raleigh and The Western North Carolina Insane Asylum at Morganton, runs from the Virginia line south *with* the Western boundary lines of Rockingham, Guilford, Randolph, Montgomery and Richmond counties to the South Carolina line. All applications from from counties west of said line to be made in Western Asylum.

The following rules have been adopted by the Board of Directors of the North Carolina Insane Asylum :


1. All applications now on file, to be renewed under the new Act of the General Assembly and recorded as received, stating name, date, county and what disposition is made of the same, and the correspondent of the applicant notified.

2. All admissions to be in the interest of the Institution, merits of the case and the protection of society.

3. *Acute* cases with good prospects of *cure*, to be admitted promptly on application, making room by *discharge*, if necessary, of some comparatively harmless and *incurable* case, from the same or some other county.

4. All other applications to be referred to the Board of Directors or Executive Committee, with such information pertaining to the same as may be of service to said Committee in deciding as to the admission of the case. Such admissions to be regulated, as far as practicable, by the population, in such manner as to equalize the benefits of the Institution among the various counties.

5. Each admission or rejection of an applicant to be a matter of record in a special book, and signed by two or more members of said Board or Committee.

 *No patient need be brought to the Asylum without previous notice of acceptance by the Board of Directors or Executive Committee.*

By order of the Board of Directors :

EUGENE GRISSOM,
 Superintendent.

RALEIGH, N. C., February 27th, 1884.

INSTRUCTION FOR STUTTERERS.

The first and second months comprise exercises in breathing. 1. 15 minutes. Inspiration and retention of breath, at the same time placing the right hand under the left false ribs, for three seconds, gradually rising to twenty seconds; repeat this three times, and then rest one minute. Expiration three seconds, increase to ten seconds; repeat three times, then rest one minute. Expiration three seconds, increase to ten seconds; repeat three times, then rest one minute. Then keep time in inspiration and expiration; pause more or less. This must be done with absolute regularity for several minutes. Beat time like in music, accelerate or retard the breathing, pause, repeat and proceed. 2. 15 minutes singing. 3. 15 minutes marching and calisthenics, especially of the arms.

The third and fourth months comprise exercises of the voice. 1. 15 minutes. Repeat breathing exercises—pause 15 minutes. 2. 15 minutes. Deep inspiration, and at expiration give utterance to the vowels, a, e, i, o, u, first deep, then middle then high, first five seconds, then rising to 20 seconds. Later, sing scales, hold the notes long, gradually expand, and then diminish. 1. 15 minutes marching, calisthenics of the arms.

Fifth and sixth months. Reading and speaking exercises. 1. 15 minutes breathing and vocal exercises. 2. 15 minutes exercises in joining vowels to consonants, and then after the consonants, always to be preceded by a deep inspiration. Then beating time to slow speaking. Deep inspiration before every sentence. 3. 15 minutes beating time to slow reading; inspiration as before.

Instruction for Stammers or Stammerers.—The teacher must accurately describe the position and motions of the organs of speech which are required for the proper articulation of the faultily pronounced letter or syllable, and practice it until it is corrected; repeat it singly or in combination with other letters or words; also the shape of the mouth at the vowels, the position of the lips at the consonants, the position of the lower lip and upper teeth at s, c, z, etc.

The tongue must never protrude between the teeth in speaking.—*Arch. d. Psychol.*—*St. Louis Med. and Surgical Journal.*—*Cincinnati Lancet and Clinic.*

OUR ADVERTISING PATRONS.

SCOTT'S EMULSION of Cod Liver Oil keeps perfectly in the hottest weather we have in the South, and has a permanent reputaion.

MESSRS. E. F. HOUGHTON & Co, the well known proprietors of COSMOLINE are fairly entitled to virtual monopoly which they have gained by the actual merit of this one article.

THE RIO CHEMICAL COMPANY formerly J. C. Richardson, of St. Louis, have endorsements of their products from gentlemen well known to our readers as will be seen elsewhere.

MR. A. A. MELLIER, of St. Louis, has the best saddle-bag in the market, judging by the immense sales they make. His preparation of Tongaline has the endorsement of trustworthy physicians.

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MESSRS. WM. R. WARNER & COMPANY lead the trade in the manufacture of soluble sugar-coated pills. By long experience we are able to say that for the purity of material, thorough incorporation of mass, and perfectly soluble coating their pills cannot be excelled,

THE TROMMER EXTRACT OF MALT COMPANY.—The Malt Extract made by this firm is without doubt the most valuable preparation of its kind. In addition to the nutriment quality of this Malt Extract its amyolotic properties make it very valuable in the feeding of infants. This firm has earned its success, not by advertising but by the superior quality of their products.

MESSRS. CASWELL, HAZARD & Co., Fifth Avenue Hotel, N. Y., are well known for their elegant pharmaceutical preparations throughout the land. Their Instrumental Department, under the direction and personal supervision of Mr. Ford, the oldest surgical instrument maker in America, is able to furnish physicians and surgeons with the completest outfit of every article usually kept in stock and all the newest appliances of foreign importation.

OBITUARY.

ELISHA HARRIS, M.D.

Dr. Elisha Harris, Secretary of the State Board of Health, died of peritonitis, after a brief illness, at Albany on the 31st January. He was born at Westminster, Vt., March 5th, 1824, and received the degree of M.D., from the College of Physicians and Surgeons, New York, in 1849. In 1855 he was made Superintendent and Physician-in-chief of the Quarantine Hospitals on Staten Island, and during the greater part of the late war he was a member of the National Sanitary Commission. For a number of years afterwards he was connected with the New York Board of Health, and on the State Board of Health, in 1880, he was appointed its Secretary—*Boston Medical and Surgical Journal*. Dr. Harris was for years identified with the work of ameliorating the condition of prisoners, and his benevolence and common sense were conspicuous. He was President of the American Public Health Association at its session in Richmond, Virginia, presiding over the destinies of this Association at a time when it had reached a crisis. His memory is especially honored by all those who had the privilege of serving with him in the pioneer sanitary work which has been in progress the last quarter of a century.

THOMAS ARTERS ELLIOTT, M.D.

To-day with common impulse the entire community of Orangeburg bows stricken with deep sorrow. To-day is realized the worth of one whose hands is nerveless and lips sealed—a worth not commanding, but winning the heart of the people. To-day a life is ended which casts far into the future a halo to guide many a follower in the radiant sheen of an experience, an example magnificently noble and yet as modest as a child's. As his life efforts were for any and all, unselfish and free, so all with deep emotion receive the dreary tidings, he is gone. As he lived, retired and shunning notoriety, so he preferred to remain when his work had ceased. Such

a life needs no touch to bring out its sympathy, to attempt this would mar a model, humanly speaking, almost faultless. We would only do honor at the shrine of the living dead, and draw, if fortunately we may, a lesson from his splendid life. Dr. T. A. Elliott was born in Charleston, November 30, 1802, and died on the 30th day of January, 1884. He had long reached the limit when weariness and sorrow set in as the companion of old age. Preferring the practice of medicine, he studied under Dr. Samuel Dickson, graduating in the Medical College of Charleston, and afterwards continuing his studies with his distinguished preceptor. On the 14th of August, 1823, he was married by the Rev. Dr. B. M. Palmer, Sr., to Miss Harriet Badger, of Charleston. His beloved consort was removed July 18, 1849, leaving several sons and daughters, the sole surviving child and daughter being Mrs. N. A. Bull, whose precious privilege through long months, perhaps years, was to soothe the declining steps of her venerated and beloved father. Grand-children and connexions are far and near whose lots are cast in other parts of the land. During the rising star of Fremont he was appointed to explore the Western wilds, an invitation was extended by him to Dr. Elliott to act as surgeon with the usual military rank. The doctor declined the honor, choosing an humbler and more useful field. His first independent practice was in Orangeburg county at what is known as Elliott's Poll. His practice grew until it extended to the largest radius possible for a hale, active man with fullest equipment of horses and vehicles to attend. It has been said that his diary shows visitations in a day beginning at home, thence to George's, thence to Aiken, thence back. Hence both vehicle and railroad contributed to place him at the service of a wide-reaching practice. Only a robust physical nature and a generous heart could meet such a demand. Moving later to Orangeburg he practiced successively with his son-in-law Dr. W. S. Dudley, after with Dr. A. S. Salley & Son, whose friendly services during all his suffering attested their high regard and affection for the venerable hero. Had Dr. Elliott measured his gain by his service, he must in his old age have lived amid the accumulations of wealth. The cry of distress, coming whence it might, from the hut or the home of plenty, was alike to his great heart. To give relief to the body and minister to a sick soul was his spontaneous desire. The reward is in the final make-up not here, but where "whosoever giveth a cup of water in My name" hath a portion at the right hand of God. Charity, generosity, stern honor, piety and self-sacrifice were the features of his life. His public spirit led him to take active part with the temperance movement, fire department, and any effort for good. His name is the patronym of societies and households. Dr. Elliott was one of the founders of the Presbyterian church of Orangeburg, and has been its senior ruling elder and president of corporation for near fifty years. The daily walk of this saint dates back to days when children—now men of years and women of ripe experience—were taught to look up to one whom all respected. That life, though shut up lately within the privacy of

his home, flashed out and ever and always a stream of light to cheer and animate. A beautiful incident illustrated the respect of all classes for him. Recently a colored fire company visited our town. They formed and paraded to his office. His eyes lit up as cheer upon cheer echoed in front of his office. He could barely stagger to his feet and wave them an acknowledgment, when the sight of his honored face roused another lusty cheer of respect. How he served the sick, how he prayed with and soothed the dying, how he gave advice to the erring, how he pitied the weaknesses of the falling, how he made the church the apple of his eye, how he cast out all bigotry, how he loved all men, how he imitated the Saviour he so closely followed, let tears tell which fall from hundreds of eyes. Sore has been the blow, yet lofty as some Colossus stands his life, an example to others to imitate, a rebuke to those whose ambition is self. Around his grave will ever cluster a host of memories associated alone with good deeds and a godly life. Business will be suspended at his funeral. The venerable Hon T. W. Glover, aged 86, and the Rev. T. H. Legare are the last two of the old landmarks of Dr. Elliott's immediate circle. These aged friends will act as his senior pallbearers. The fire department will attend as an organization, also the Order of Temperance. The Doctor's remains will be placed in the cemetery of the Presbyterian church.—*Exchange*.

ORANGEBURG, January 30, 1884.

QUELQUEFOIS.

BOOKS AND PAMPHLETS RECEIVED.

Fifth Annual Report of the State Board of Health of Maryland, January 1884. Annapolis: James Young, State Printer. 1884.

Ninth Report of the State Board of Health of Minnesota, for the Years 1881 and 1882. Minneapolis. Johnson, Smith & Harrison, 1883.

Fifth Annual Report of the Board of Health of the City of Atlanta, for the Year 1883. Jas. P. Harrison & Co., Printers, Atlanta, Ga.

First Annual Report of the New York Skin and Cancer Hospital, No. 243 East 34th Street. With Act of Incorporation and By Laws. New York. 1884.

Biennial Report of the State Board of Health of Minnesota, for the Years 1881 and 1883. Printed by Authority. Minneapolis: Johnson, Smith & Harrison. 1884.

Is the Extirpation of the Cancerous Uterus a Justifiable Operation? By A. Reeves Jackson, A.M., M.D. Reprint from Volume VIII Gynecology Transactions. 1883.

Circulars of Information of the Bureau of Education. No. 4—'83. Recent School Law Decisions: Compiled by Lyndon A. Smith, A.B., LL.M. Washington: Government Printing Office. 1883.

Annual Address delivered before the American Academy of Medicine, at New York, October 10th, 1883. By Henry O'Marcy, A.M., M.D., President of the Academy. Philadelphia. 1883.

Thirteenth Report upon the Births, Marriages and Deaths, in the State of Rhode Island, for the Year ending December 31, 1882. Prepared by Charles H. Fisher, M.D. Providence: R. L. Freeman & Co., Printers to the State. 1883.

On the Pathology and Treatment of Gonorrhœa. By J. L. Milton, Senior Surgeon to St John's Hospital for Diseases of the Skin, London. Fifth Edition. New York: Wm. Wood & Company, 56 and 58 La Fayette Place. 1884.

Circular from the State Board of Health of California, to the Boards of Trustees and Local Boards of Health of Incorporated Cities and Towns, with Extracts from the Political Code. F. W. Hatch, M.D., Secretary, Sacramento, Cal.

Report of Memorial Meeting of the Medical Society of the District of Columbia, at the National Capitol, In Honor of Dr. Marion Sims, November 21, 1883. (Reprinted from Gaillard's Medical Journal, February, 1884. New York: H. A. Vonneidshutz, 69 Pearl Street. 1884.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 3. Wilmington, March, 1884. Vol. 13.

ORIGINAL COMMUNICATIONS.

OLD LUXATION OF THE HEAD OF THE RADIUS—SE-
BACEOUS CYST OF THE NECK—STRICTURE OF THE
URETHRA, GRADUAL DILATATION.

A Clinical Lecture delivered at the Hospital of the University
of Pennsylvania.

By JOHN ASHHURST, JR., M.D.,

Professor of Clinical Surgery in the University of Pennsylvania.

Reported by WM. H. MORRISON, M.D., for the NORTH CARO-
LINA MEDICAL JOURNAL.

OLD LUXATION OF THE HEAD OF THE RADIUS.

GENTLEMEN :—The first case that I shall show you is one which has been sent to us from the country with the statement that it is a case of ununited fracture of the radius, but on carefully examining the arm I find that while there has evidently been a fracture of the ulna below the olecranon process—not through the process itself,

but through the shaft of the ulna—and also a dislocation of the head of the radius, the latter bone is not broken. Dislocation of the radial head is an injury which unfortunately is apt to pass unrecognized, for in a recent case, swelling takes place very rapidly and under such circumstances, it is difficult to say whether or not the bone is out of place. This is unfortunate because it is very hard to reduce the dislocation after it has existed for even a short time.

This man is anxious that something should be attempted, so I have told him that I will give him ether and see if I could reduce the dislocation, but it is unlikely that I shall succeed. I may, however, by breaking up the adhesions which had formed, give him a more useful arm. In many dislocations, the patient may have a useful limb although the dislocation remains unreduced, as for instance in ischiatic luxation of the hip; the patient is often able to walk quite well, of course with a limp, although the bone is out of place. In the elbow, when the dislocation involves the ulna, you cannot expect to gain much if reduction is not effected, for such an injury causes great interference with flexion and extension. When the luxation involves the radius alone, flexion and extension are not so much interfered with although pronation and supination are impaired.

There possibly may have been another injury in this case, that is a separation between the condyles of the humerus. We often have complicated fractures about the elbow. Here we certainly have two injuries, fracture of the ulna and dislocation of the radius. There may also have been a splitting fracture of the humerus between the condyles. The condyles seem a little further apart than normally, and the olecranon a little higher than it should be in reference to the condyles. This is, as you know, a diagnostic point between dislocation of the ulna and fracture above the condyles. In dislocation of the ulna, the olecranon is pushed up beyond the line which unites the two condyles, whereas in fracture of the shaft of the humerus just above the condyles, although the deformity is apparently the same, the condyles and olecranon are carried up together. If there is a fracture between the condyles allowing them to separate, there will be a slight elevation of the olecranon, which thus changes its position with reference to the condyles. This simulates dislocation of the elbow, but the displacement of the olecranon is so much less than in that injury, that a mistake can hardly be made.

The deformity is here quite marked. There is a deep excavation

on the posterior aspect of the ulna, showing where it was fractured. In front, there is a prominence which is the head of the radius. These points are much more apparent than they would be if the case were a recent one. I do not at all blame the practitioner who treated this case in the early stage for not recognizing the dislocation of the head of the radius, because as I have said, it is difficult to recognize, and, as a matter of fact, is overlooked. If you do not have the possibility of its occurrence in your mind, you will probably not notice it, but if you have it before you and look to see if the head of the radius is in its proper position, you will detect its displacement. This is one of those changes in appearance which do not force themselves upon your observation. I can here distinctly feel the head of the bone an inch and a half in front of the exposed condyle.

I have reduced a dislocation of the radius in a child three or four weeks after the injury, but it is a difficult thing even to do that, and still more difficult to keep the bone in place after it is reduced. In the case referred to, the patient passed out of my care, and after a time the dislocation was spontaneously reproduced, so that in the end, nothing was gained. As I have said, I think that in the present instance, it is more than likely that we shall be able to accomplish nothing in the way of reduction. I, however, hope to give the patient more motion than he now has. The power of flexion, extension and possibly supination will be increased. We shall hardly make the condition worse even if we fail to make it better.

The patient is now fully relaxed by the anæsthetic, and I begin by breaking up the adhesions by flexion, which is always to be made before extension. Dr. Wharton grasps the head of the radius and makes pressure while I flex the forearm and then make supination and extension. The bone does not go back, although it has changed its place. (This manœuvre was practiced several times, but the dislocation could not be reduced, although the bone was placed in a better position.) When the injury is recent, it is a comparatively easy matter to effect reduction, and to maintain reduction, the arm should be dressed with an well padded anterior angular splint, with a firm compress over the head at the radius. This position should be maintained for about a fortnight, by which time the ruptured ligaments will probably have been repaired and there will not be so much danger of the dislocation being reproduced.

This patient, by persevering use of his arm can prevent the reformation of the adhesions which have been broken up, and will have a useful limb, although, of course, not so useful as if reduction had been accomplished. The arm will be dressed with an anterior angular splint and lead water and laudanum applied, to moderate any inflammation that may follow, has subsided, we shall encourage the patient to use the arm as much as possible. A compress will be placed over the head of the radius to keep it as nearly in its places as possible, so that if it should become adherent again it will be in a better position than before.

This injury is sometimes associated, as I have said, with fracture of the condyles; sometimes too there is fracture of the neck of the radius associated with fracture, usually of the internal condyle. If the force on the outside of the arm is expended on the radius, the force on the inside is often expended on the internal condyle, breaking it. It is not often the ulna and internal condyle give way together. Sometimes, however, there is fracture of the olecranon with fracture of the external condyle.

It has been suggested that it would be justifiable in such cases as this to cut down and excise the displaced portion of bone, but, I think the operation too serious a one to be justified by the condition. The patient can get a fairly useful arm with the head of the bone out of place, and I think that the surgeon should be satisfied with that result. In cases of irreducible dislocation of the ulna, however, excision is justifiable, as the usefulness of the arm is now greatly impaired.

The limit of time at which a dislocation can be reduced varies with the particular joint. A dislocation of the shoulder can, perhaps, be reduced at a later period than any other. I have succeeded in reducing dislocations of this joint, which existed six weeks or more, and there are cases on record which have been reduced after six months and even longer. Dislocations of the hip can sometimes be reduced after a number of months but in such cases the reduction is more difficult, than in the case of the shoulder. Dislocation of the hip becomes very difficult to reduce even a few days after the injury. Thus I remember one case in which I succeeded, only with great difficulty, in reducing a dislocation of the hip which had been out but four days. A recent dislocation of the femur can, on the other hand, usually be reduced very easily. Dislocations of the elbow also

become difficult of reduction after a short time. Other difficult dislocations to reduce, are those of the fingers or thumb. The difficulty in the case of the thumb is probably due to one of the sesamoid bones becoming entangled between the articular surfaces and thus preventing reduction.

SEBACEOUS CYST OF THE NECK—REMOVAL.

This patient has a small tumor on the anterior of the neck which apparently is a sebaceous cyst an example of what the Germans call a retention cyst. The sebaceous glands are scattered over the body, and when their ducts become obstructed there is an accumulation of the natural secretion, and its retention leads to the formation of these tumors. This has existed for a number of years, but lately has been increasing in size. There is a little black spot at one point which looks as though it were the orifice at which the gland had been in the habit of discharging. The patient prefers not taking ether.

I make an incision through the skin, taking care not to open the cyst. The adhesions are usually most close to the cutaneous surface. After separating these attachments the tumor is readily removed. On section we find this sebaceous matter or atheroma, a name given to it because of its gruel-like appearance, resembling the material formed in atheroma of the arteries, although it is of course, the result of an entirely different pathological process.

There is one form of cyst which appears in this situation which it is important to remember, because its treatment is more difficult. It is what Dr. Hamilton, of New York, terms Super-Laryngeal Encysted Tumor. It is a bursal tumor attached very closely to the larynx. It, of course, rises with the larynx in swallowing and in that way may be distinguished from superficial growths. It is not to be confounded with goitres, which also rises with the larynx. Goitre is an enlargement of the thyroid gland, and is not necessarily cystic although it may be so. The super-laryngeal encysted tumor is, as I have said, very closely attached to the larynx and its removal by excisions is attended with some risk, as laryngitis may follow the operation. The safest treatment is tapping, followed by the introduction of a seton, or cutting away a part of the anterior wall of the cyst, as in cases of ranula.

STRICTURE OF THE URETHRA—GRADUAL DILATATION.

I have still one more patient to show you. This man who has a stricture of the urethra has been under our care at intervals, and we are treating his stricture by dilatation, which is much the safest plan wherever it is possibly to employ it. The instrument which we have been using is the conical steel sound. There is a difference between the urethral sound and the vesical sound. The latter is an instrument designed to search for stone in the bladder. It is usually made of the same calibre throughout, or if anything with the beak a little larger than the shaft, so that while it can be readily manipulated in the urethra, the end shall be sufficiently heavy to give a decided sound on striking a stone. The urethral sound is made with a conical shaft being smaller at the beak than at the end near the handle. The diameter of each of these sounds ranges through three numbers of the French scale, the number giving the diameter of the sound in thirds of a millimetre. The sounds vary from No. 1 ($\frac{1}{3}$ of a millimetre in diameter) up to No. 30 (10 mm. in diameter). Any metallic instrument smaller than No. 8 of the French scale is very dangerous in the urethra. For a tight stricture you should, therefore, prefer a flexible instrument, which can be introduced, sometimes with ease, but oftener with a certain amount of difficulty. These are much safer than small metallic instruments.

For ordinary use, in drawing the urine, a flexible catheter will be found more serviceable than the solid metal catheter. What is known as the English catheter is, I think, upon the whole, the best instrument when it is simply desired to evacuate the bladder without making any dilatation. There are different forms of flexible catheter. This one is known as the Nélaton catheter and is so flexible that it can readily be tied into a knot. Here is the ordinary French catheter which while it cannot be tied into a knot, is still very flexible. The one which I now show you is the Mercier or elbowed catheter, which is of service in some cases of enlarged prostate. In reading French works, on urethral surgery it is important to bear in mind that they apply the term sound (*sonde*) to the instrument which we call a catheter, and in sounding the bladder when they refer to drawing the urine. The Nélaton catheter is of service in enlarged prostate and is a safe instrument for the patient to use himself. I think, however, that you will find the English instrument

more satisfactory than either the French or silver catheter. It is as you see, provided with a stillette, but the stillette is to be removed when the instrument is used. It is merely intended to keep the curve of the instrument. It is well to keep an English catheter with an exaggerated curve for use in prostatic enlargement. Any desired curve may be given to this instrument by dipping it in hot water to fix it. It will keep this curve for a minute or two, sufficiently long for the instrument to be passed into the bladder, if there is no obstruction. This instrument when properly used causes even less pain than the flexible French catheter.

Where, however, it is necessary to produce dilatation, the conical sound is the most satisfactory instrument. The use of these instruments was introduced by the late Dr. Vanburen, of New York. The rule is to use three numbers on each occasion. For instance if you begin with No. 15, you may advance to Nos. 17 and 19. That is far enough for one day. On the next occasion, you should go back to No. 17 and advance to Nos. 19 and 20 or 21. The instrument should be passed to two, or at most three times a week, until the urethra is dilated to the full extent.

In the present case No. 22 was passed when the patient was last here, and I shall therefore go back to-day to No. 19. The instrument should be warmed by friction with the hand, for a cold instrument sometime produces a spasm of the neck of the bladder. In any case where you expect difficulty, you should take your position on the left of the patient, which is just the reverse of the position assumed in sounding for stone where you stand on the right hand or in front so as to manipulate the sound with the right hand. In passing an instrument where you are sure there is no difficulty, you can stand on the right side and pass it by what the French call the *tour de maitre* which consists in passing the instrument with the curve reversed until the beak reaches the bulbous portion of the urethra, and then suddenly turning it around and pushing it into the bladder. This is often a convenient mode of passing instruments when you are thoroughly practiced in their use, but it is not a plan to begin with.

I allow the sound to enter almost by its own weight. Having reached the stricture, pressure with a finger in the rectum will often aid the sound to pass through the obstruction. It was formerly taught that an instrument should be allowed to remain in the urethra for some time, say twenty minutes, but it is better to withdraw it

immediately, for nothing is gained by allowing it to remain, and its presence cause irritation. Some cases of obstinate stricture are best treated, however, by continuous dilatation. This consists in securing a flexible instrument to the bladder and permitting it to remain twenty-four or forty-eight hours, when it is replaced by a larger one. As you see, a drop of blood escapes, but that is of no consequence, as is apt to follow the most careful manipulation. It comes from the congested mucous membrane. If the bleeding is profuse, showing that a false passage has been made, the use of the instruments should be abandoned, until the parts have had time to heal.

I have now passed a No. 24 sound, which is quite enough for to-day. This is a large man, and as a rule, large men have large urethras. I have no doubt that we shall eventually be able to pass a No. 26 or 28 sound without difficulty.



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WOUND OF KNEE JOINT—APPLICATION OF PERMANENT ANTISEPTIC DRESSING—RECOVERY.

By M. O. BUNN, M.D., Wilmington, N. C.

The following case illustrates quite forcibly to our mind the value of antiseptics in the treatment of incised wounds of joints :

On December 4th, 1883, was called to see a negro boy, æt. 10 years, who had just cut his knee with a drawing-knife while attempting to make an axe-handle. Found him suffering considerable pain, and on examination found that the knife had entered the knee-joint, on the outer side, just below the level of the patella, slightly injuring that bone in its upward course, and very nearly severing the flap of tissue (which was about one and a half inches in diameter, and of circular form) from the leg.

Having none of the paraphernalia of Lister at hand, we concluded to extemporize. The wound and leg were cleansed as thoroughly as possible, first with castile soap and water, and afterwards with a carbolyzed (1 part acid, in 40 of water). A sponge saturated with the lotion was then placed over the wound, while the other appliances were being prepared.

Procuring some cotton batting, it was placed between the folds of

a handkerchief, and thoroughly saturated the carbolized solution. Bandages of white homespun were treated with it also. Then, after placing several carbolized silk sutures in the lips of the wound, coaptating it as evenly as possible, the whole knee was enveloped in the batting, from which the excess of water had previously been pressed. Upon this the bandages were applied, at first loosely, then gradually more snugly, until the limb was covered by six or seven thicknesses of cloth, from about six inches above the knee to about six inches below it. This completed the dressing.

Fearing a stiff knee, and wishing to keep the boy quiet, a long Liston splint was applied, omitting the perineal strap, and the patient placed in bed, with orders to keep quiet. She did not develop any untoward symptoms, the temperature did not reach at any time over 101° F., and the dressing was not disturbed until the twelfth day after application. Upon removal repair was found complete, and not over a teaspoonful of discharge had accumulated in the batting. The knee was not stiff in the least, and the boy is now as well as ever, one month since the accident.

This case furnishes two important deductions :

1. We may secure good results without recourse to absolute Listerism, by careful attention to the thorough cleansing of parts before wounds are closed.

2. Even the country practitioner may not think it impossible or improbable, to secure, in this class of injuries, union by first intention, if he will use properly the means at hand, supplemented by the judicious use of antiseptics, and by careful attention to after-treatment.

If any reader of this has had a similar case, we would be glad to hear from him, through the JOURNAL or by letter.



SUGAR IN TOBACCO.—Prof. Attfield has examined eight samples of tobacco from Virginia, Kentucky and North Carolina to determine the presence of sugar. He found an average of 7.38 in 100 parts of tobacco leaf. The tobacco sugar has no effect on polarized light, and the article suggests the possibility of its being a sugar peculiar to tobacco. See March number *American Journal of Pharmacy*, p. 147-150.

SELECTED PAPERS.

PROGNOSIS IN HEART DISEASE.

Abstract from the Harveian Lectures by W. H. BROADBENT, M.D.

Prognosis is the knowledge not only of the end but of the course disease; it is in fact, only a branch of diagnosis. This remark upon the value and importance of prognosis applies with special force to heart-disease. What a difference there is in the presence of a case of disease of the heart, in which the question of the future arises, between the man who knows, and him who can only conjecture! The one must hide his ignorance and defend his credit by vagueness of statement; must, therefore, on recognizing the existence of heart-disease speak of sudden death as amongst the contingencies to be feared; or, having seen that his apprehensions in previous cases had been falsified, he may, on the other hand, lull the sufferer into false security, and not only fail to warn him of inevitable danger, but precipitate the fatal termination. The other, secure in his knowledge, will distinguish the cases in which he must warn from those in which he may hold out encouragement.

Sudden Death in Heart-Disease.—In the mind of the general public, disease of the heart and sudden death are so clearly associated, that the mention of the one immediately suggests the other. It must be understood that the sudden death under consideration is such as is meant by the phrase “dropping down dead” with little or no warning, the individual having been up to the moment in apparent health, or so far well as to be able to go about his duties. Medical men are well aware that this apprehension on the part of the public is greatly exaggerated; but they hardly sufficiently recognize that sudden death is a contingency which may almost be left out of consideration in valvular disease, except in aortic regurgitation. Dr. Sidney made at the request of Dr. Broadbent an abstract of nearly 400 cases in which, on *post mortem* examination, the heart had undergone marked changes. Of these, 151 were cases of valvular disease; among them, eleven were examples of aortic stenosis, without one sudden death, in the sense of the sufferer being overtaken by death while in apparent health; of aortic insufficiency and regurgitation, three were brought to the hospital dead, a fourth died suddenly in the hospital; in six more the final symptoms came

on abruptly, and were rapidly fatal. Of 53 cases of mitral stenosis, one was brought in dead. The cases of mitral insufficiency or regurgitation were 40 in number; of these, two may be said to have died suddenly, but both had serious symptoms, and were under treatment in the hospital at the time, and in both the pericardium was adherent, in three more a sudden attack of dyspnœa set in, and proved rapidly fatal.

Under the head of hypertrophy and dilatation, only two sudden deaths were directly attributable to the state of the heart. When, however, we come to fatty degeneration, the story is very different. In nine of thirty-eight cases the termination was sudden; it is, in effect, to fatty degeneration that heart-disease owes much of its terror of sudden death. It will, be sufficiently evident that in valvular disease of the heart, with the exception of aortic insufficiency, we are justified in assuring our patients and their friends that there is practically no danger of sudden death.

General Prognosis of Valvular Diseases.—We shall consider, first, the prognosis of the valvular affections, which are of most importance, becomes most numerous and best understood. We may be called upon to form an opinion as to the probable course, duration and termination of valvular disease of the heart at different stages, and under various circumstances.

1. The subject may be in perfect health.
2. Effects of the imperfect propulsion, or of damming back of the blood. May have become manifest in pain, breathlessness, cough, debility, with other concomitant symptoms.
3. The patient may be in some stage of dropsy, or in the crisis of some pulmonary complication, or subject to paroxysms of dyspnœa, or to attacks of syncope.

If now we ask ourselves what facts we should desire to know, in order that we might prognosticate the course and issue of a given case of valvular disease of the heart, the answer will be as follows :

1. The valve affected and the relative danger attaching to the particular lesion.
2. The actual condition of the orifice and valve ; and the degree of obstruction, or amount of regurgitation, to which the lesion has given rise.
3. The nature and tendency of morbid change in the valve, whether it is stationary or progressive.

4. The degree of soundness and vigor of the muscular substance of the heart, and of the tissues generally; how far, in fact, compensatory changes can be counted upon.

5. The mode of life of the patient.

The actual condition of the orifice and valve affected must now be considered. Our guide in localizing disease in the valves of the heart is chiefly a murmur, produced by obstruction to the current of blood; when one or other orifice is narrowed or roughened; or by regurgitation, when a valve no longer closes perfectly. By means of the murmurs we learn definitely which valve is affected, and in what way, but they fail altogether to indicate of themselves the amount of damage which a valve has sustained. A loud murmur may be produced by a very slight change, and a murmur which is scarcely audible, may be indicative of most extensive destruction.

Murmurs may be compared or contrasted in several respects; in intensity, in duration, in character, and in their relation to the heart in point of time.

A loud murmur is, on the whole, of less serious import than one which is weak and soft, it is, at any rate indicative of force in the heart's action, and weakness of the heart constitutes the greatest of all dangers. It must not be concluded that a soft or weak murmur necessarily signifies either a failing heart or a greatly damaged valve, but a diminution of the intensity of a murmur, gradual or sudden, may confirm unfavorable indications given by symptoms.

A long murmur, except in the case of mitral or aortic stenosis, is usually indicative of early and comparatively slight disease, and of efficient action of the heart. Sometimes, a short murmur is significant of impending danger.

The character of a murmur, its roughness or smoothness, may have diagnostic significance, as will be pointed out later, but does not give any information with regard to the extent or structural change or functional derangements.

An accent at the beginning of a murmur shows that the valves still act as a check on the reflux of blood.

A postsystolic or postdiastolic murmur shows that the valves come together accurately at first, but fail to remain in apposition throughout the whole period of ventricular contraction; it indicates that the amount of leakage can only be slight.

The conclusions drawn from the pulse add materially to the

information; in aortic obstruction the pulse will belong, and the initial "percussion wave." In aortic regurgitation, we have the well-known collapsing pulse. In mitral stenosis, the artery is small, and full between the beats, but usually regular; while mitral regurgitation, when considerable, is attended with extreme irregularity of the pulse.

But these murmurs, and the character of the pulse, furnish no reliable measure of the degree of obstruction and amount of regurgitation; we possess such an indication, however, first, in the effects on the cavities and walls of the heart; secondly, in the evidence of obstructed circulation in the lungs or in the system.

Hypertrophy and dilatation are looked upon as caused by the valvular lesion, and as affording a measure of its extent; but let me not be understood to assert that, the less the hypertrophy and dilatation, the smaller the valvular damage, although this is usually true. The prognostic meaning of hypertrophy and dilatation is recognized by all writers; but the idea, that the structural changes in the walls of the heart are the direct result of valvular disease, though very natural, is frequently set aside as too simple. According to many authors, the symptoms and ultimate fatal termination are due, not to the valvular disease itself, but to the hypertrophy and dilatation with which it is associated; and the difficulty is stated thus by Walshe:

"No direct ratio constantly holds between the amount of hypertrophy and the valvular obstruction, showing that there is something beyond the mechanical difficulty, which contributes its quota of causation."

This is, however, capable of explanation by the following considerations: First, different affections of the valve have, inherently and mechanically, different degrees of tendency to the production of structural alterations; secondly, the time of life which the lesion of the valves takes place is of great significance, a given valvular affection, for example, established in youth, will be survived with great hypertrophy; after middle age it will prove fatal before structural change can be accomplished; thirdly, time is an important element in the development of hypertrophy, fourthly, the mode of life will influence the degree of hypertrophy, and, finally, the period after the occurrence of the valvular change, at which active exercise was undertaken, will have great influence on the condition of

the heart-walls and cavities. In the above conditions, we have the quota of causation beyond the mechanical difficulty at the valves, which explains the variations observed.

After reviewing the effects which valvular lesions would produce, he concludes, that the relation between valvular and associated structural alterations is one of cause and effect; secondly, that these changes are strictly conservative; and thirdly, that these changes, with due qualifications are a measure of valvular disease.

The Stationary or Progressive Character of the Lesion as Influencing Prognosis.—So many differences exist, arising out of the character of the pathological process by which the valve is affected that it will be necessary at this point to enumerate the principle causes of lesions in the valves and orifices. They are as follows:

1. Congenital malformation of the valves. Any such condition would be permanent and stationary.

2. Acute endocarditis. Valvular lesions from this cause, are for the most part, stationary, except when, by adhesion between the flaps of the mitral valve, stenosis of this orifice is produced.

3. Chronic endocarditis and degeneration. This is common in later life, is due to gout or renal disease, and has a progressive tendency.

4. Rupture of a valve. This is a rare occurrence. It is usually the aortic valve which suffers, death almost invariably ensuing rapidly, or one or more of the tendinous cords of the mitral valve may be ruptured.

5. Dilatation of the orifice may derange the functional efficiency of a valve, while the valve itself has not undergone any material change. This is not uncommon in the mitral valve, causing regurgitation, which may occur at any period of life, and under very different conditions. It may be induced by acute disease such as enteric fever and acute rheumatism, or by a debilitating influence such as anæmia.

The distinction which it is usually most important to ascertain is between lesions originating in acute endocarditis, which are therefore, probably stationary, and lesions produced by chronic inflammatory, or degenerative change, which are inevitably progressive.

Thus far we have been discussing the prognostic indications furnished by the heart itself, we have now to examine into other conditions which influence the future of a case of heart-disease.

Age—Valvular disease appears to be more serious in early childhood, than a few years later. The heart cannot both keep pace with the active growth of this period of life, and answer the demand for hypertrophy.

Sex—It is remarkable that mitral stenosis is much more common in women than in men. Out of 53 cases, 38 were in females, and only 15 in males. On the other hand, aortic insufficiency is more frequently met with in men. Out of 36 cases, 30 were males, and only 6 females. When valvular disease has been established in childhood, girls are, according to my experience, more likely to break down at the trying period of puberty than boys, and the compensatory changes are less perfect in the former than in the latter.

Hereditary Tendencies—In no class of cases is it more necessary to enquire into the family history than in diseases of the heart. It is more particularly in affections of the muscular walls that a family tendency to heart-disease is seen, and antecedent to this, and explaining it is puerperal resistance from undue arterial tension.

Anæmia—A deterioration of the blood is a common and almost inevitable result of heart-disease, when this reaches a point at which it begins to affect the circulation. The impeded and slackened flow of blood prevents those active changes from taking place by means of which the blood is constantly removed, absorption of food will be hindered by the languid movement of the blood in the gastro-intestinal mucous membrane. Anæmia, therefore, is a serious element in the forecast. It has a serious detrimental effect on the heart affected with valvular disease, again, it is often attended with palpitation of the heart, and will add to this distressing and sometimes dangerous symptom. Anæmia may of itself give rise to œdema, and it will precipitate the occurrence of dropsy when the tendency of the heart-disease is in the direction of this complication. There still remains for consideration, the prognostic influence of the circumstances and mode of life of the patient. The man who must labor with his hands, who is exposed to all weathers, whose food is poor, who breathes impure air, and indulges, perhaps, in drink, who seeks advice only when too ill to continue his avocation, has far smaller chances than the man who seeks advice early, and who has adequate means to follow it out.

Scarcely less important is the degree of tension which exists in his arteries, high pressure, increasing the shock of every closure of

aortic valves and also of the mitral valves by rendering necessary more powerful contraction of the ventricle in order to drive on the blood, is necessarily injurious, aggravating mischief already effected.

In order to complete our view of the prognostic indications in valvular disease, the modes of death must be described together, with the symptoms which lead up to a fatal termination.

Ultimately, the immediate cause of death from heart-disease is failure or arrest of the circulation. This may occur in two ways; from arterial emptiness, caused by want of propulsive power, seen in aortic obstruction and regurgitation; further, the two conditions mutually generate each other, and so complicate each other. For example, in aortic incompetence, the blood, flowing back from the aorta under high pressure, anticipates in some degree the entry into the ventricle of blood from the auricle, the auricle does not fully discharge its contents, and the due amount of room is not made for the blood arriving by the pulmonary veins. So long as the capacity of the two ventricles is the same, the right will send more blood into the pulmonary circulation than the left can receive from it. The original tendency, however, predominates, and gives a special character to the fatal termination, and to the final symptoms. In aortic disease, the patient is pale, weak, suffers from shortness of breath, giddiness, faintness, and a sense of oppression; as the disease advances, there is anginoid pain, sleeplessness, gasping dyspnoea, often no dropsy, or this may be absent until a very late period of the disease, and death may occur by sudden syncope, or from exhaustion, or by an acute intercurrent pulmonary attack. In mitral disease, the early symptoms indicate pulmonary obstruction, and dropsy sooner or later is the rule; as a rule, the face is dusky, though in some cases is pallor; the extremities are cold and purple; the breath is short, there is cough, and congestion of the lungs is easily induced.

Later there is habitual dyspnoea, the dropsy advances; sleep is broken or almost lost, for voluntary respiratory effort is needed to supplement the ordinary reflex movements of respiration.

The exact conditions which determine the effusion of serum into the connective tissue in heart-disease form an interesting study.

The condition which is most certainly and conspicuously present is obstruction to the return of venous blood to the heart,

but that it is the efficient cause of dropsy is questioned by Dr. Walshe, he says that something beyond the cardiac disease is required in order, as a matter of necessity, to entail the occurrence of dropsy; that this is shown by the facts that there is no direct relationship between the amount of heart-disease and of dropsy, that dropsy comes on suddenly from extraneous causes the state of the heart remaining, as far as ascertainable, in precisely its previous condition, and that dropsy diminishes and increases, while the organic changes in the heart remain permanent and unmodified. But this reasoning is valid only on the supposition that the effect on the circulation is exactly the same, when apparently similar conditions of valves, cavities and heart-walls are present.

But such is not the case, the return of blood by the veins may vary greatly when very similar affections of the walls and valves are present. In extensive valvular disease, we have a state of unstable equilibrium in the circulation, in health the heart responds to calls made upon it by varying conditions, such as temperature excitement or emotions, but in disease the adjustments are effected with difficulty, and may fail altogether under slight provocation. It seems to me difficult to imagine more effective agencies in the production of the changes referred to than a delayed circulation, the sluggish stream can neither furnish the digestive secretions in due quantity nor of proper quality, nor take up the nutritive materials with the normal rapidity, nor can the assimilating organs, impeded in their functions by chronic congestion, effect perfectly the further changes necessary to the formation of healthy blood.

The tissues, also, permeated by a slow current of unhealthy blood, can neither obtain sufficient matter for their renewal, nor get rid of the products of waste, and consequently fall into a state of degeneracy.

When a patient, after exertion or exposure, begins at once to suffer from dyspnœa, pulmonary congestion, and dropsy, he having previously been free from these affections, and his valvular disease compensated for by hypertrophy, in such a case we can scarcely say there has been such a change in the blood or tissues as to determine the effusion; clearly the increased derangement of the circulation has given rise to the serous exudation.

Bringing, in conclusion, some of the chief indications dwelt

upon to a focus, we have, let us say, an individual in apparent health in whom a valvular murmur has been discovered; there is, however, no modification of the pulse, and no structural change in the heart.

Here the change in the valves is slight, and present danger there is none.

The future of such a patient will depend on the nature of the lesion whether, that is, it is old and stationary, or recent and progressive. In one case he may reach old age, in the other, may have only two or three years to live.

In another case, while there are no symptoms, there is dilatation and hypertrophy, or both, and a corresponding modification of the pulse.

These show that the valvular change is sufficient to have called for compensation, and although this may be sustained under ordinary circumstances, it may break down under strain of any kind. If the lesion is progressive, symptoms will not long be absent.

In yet another patient, embarrassment of the pulmonary or systemic circulation has been set up.

Here danger is never far off, though it may be guarded against for years. Symptoms once present, there is, speaking generally, less probability of prolonged life in aortic than in mitral disease.

The state of the walls and cavities of the heart will be important, but still more the question whether the symptoms are due to some temporary and remediable cause, or are the direct result of the state of the valves.

The stationary or progressive character of the change loses none of its importance.

The only hope lies in the absence of any tendency to aggravation of the valvular lesion, together with soundness of the structures generally, and a good family history

When we are called to a patient suffering from some severe pulmonary complication or from advanced dropsy, the first question will be whether the symptoms have come on gradually or have been precipitated by exposure, over-exertion, or other adequate cause.

If they have supervened in spite of favorable circumstances, there is little chance of their arrest. If, on the other hand, some

powerful disturbing influence has overthrown the equilibrium of the circulation, this may be regained if the heart manifests power and if the dilatation and hypertrophy do not tell of a hopeless extent of valvular mischief.—*British Medical Journal*.

SULPHIDE OF CALCIUM FOR SCABIES.—Dr. Dolan, (*British Medical Journal*, Feb. 9) says that sulphide of calcium, known in Poor-law service as golden lotion, is more effectual in the treatment of itch than conventional sulphur ointment. It may be made by the following formula: Flour of sulphur, 100 parts; quick lime 200 parts; water, 1000 parts. Boil the whole for some time, stirring occasionally until the substances become incorporated, allow the liquid to cool, and decant into hermetically sealed bottles. It should not be made in a metal vessel.

It is applied as follows: The patient is first put into a warm bath; he is then painted with a brush dipped in the solution and placed in bed, either in blanket, or a flannel nightgown. After a short time, owing to the deposit of sulphur, the patient's body is almost the color of a guinea. The beneficial effects are speedily manifested; the itching ceases, and, as a rule, in simple cases, after another warm bath, the patient may be discharged cured.

AN APPARENTLY GOOD COUGH MIXTURE imitating a nostrum in popular use:

Tar, 60 grains.

Powdered sugar 960 grains.

Mix intimately by trituration in a mortar, and add gradually a mixture of six fluid ounces each of alcohol and water; and then add enough syrup—(glucose and cane-sugar syrup) to make five and a half ounces, having previously placed into the bottle:

Oil of anise, 2 gr.

Chloroform, 60 gr.

Fl. ext. wild cherry, 96 gr.

Fl. ext. ipecac 48 gr.


Mix and strain after allowing it to stand for several hours.—*American Druggist*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE BREACH IN THE NEW YORK PROFESSION.

The breach in the New York profession has been consummated, as was long ago anticipated, and a new state organization formed under the name of the New York State Medical Association. The meeting of the Convention for organization was held on the 4th of February, and the minutes are now before us.

Dr. H. D. Didma was called to the chair, and was made subsequently president of the permanent organization. His remarks were full of feeling, indicating how deeply the rupture between the two wings of the profession has become in a few years.

Dr. Gouley presented a canvass of the members of the profession of the entire showing a clean majority of over a thousand for the code of the American Medical Association, and in the State Society, a majority on the same side. It appears, however, that the "New Code" advocates were present in full force at the meeting of the State Society, and that the other side was not so active.

Dr. Austin Flint, Sr., addressed the meeting, rehearsing the bitter

strife which has been waging in New York city. He unhesitatingly favored the formation of a new society, and put the whole affair, by his argument, in a shape that the profession outside of New York can enter into sympathy with him.

“To-night” he says in his address to the convention, “we should organize a New York State Medical Association. The issue has been forced upon us. We stand in the presence of the actual fact of a divided profession. The State Society and the Society of the County of New York have receded from the regular profession of the United States. We made no movement looking to a formation of a legal State Association until the most vigorous efforts to redeem the existing Societies had signally and hopelessly failed. We are now cast out of fellowship with the regular profession of this great country, as represented in the American Medical Association and in the Medical Societies of other States. We must redeem the State of New York. There remains but one course to pursue, and that is to form an Association of our own. The bitter fight, the disgraceful spectacle of a contest between members of a devoted and honorable profession are things of the past. The war is ended. Let us organize and live together in peace, working hand in hand for the advancement of the science of medicine. Let the men who are so blind or misguided as to think their course is right, or who cannot resist the temptation to take tribute from those who persist in supporting the enemies of truth and of our universal science of medicine, go their own way and consult on terms of equality with any and all legally qualified practitioners of medicine, whatever form of charlatanism they may assume!”

We most sincerely deprecate the estrangement which must follow this action, between the elder members of the New York profession, but the sympathy of the Southern profession will be almost unanimously with the action of the New York Convention.

The machinery of the New Association has been completed. The next meeting will be held in New York city, in November of this year. It will have a representation at the next meeting of the American Medical Association, May 6th, in Washington.

We notice in the list of members of the New York Medical Association many names the whole profession delights to honor.

TRANSACTIONS OF THE MEDICAL SOCIETY—HOW TO GET BETTER PAPERS.

The Transactions of the Tarborough meeting have just been issued. The delay has been caused by a number of circumstances beyond the control of the Committee on Publication. Had the Committee carried out the rule, that all papers not in by a specified time, would be rejected, only two would have appeared. Manuscript came in as late as the beginning of this year, and these had to be rejected for no intrinsic fault of the papers, but as a matter of time. It may occur to the contributors whose papers were left out, that theirs was equally as good as those accepted, and this is undoubtedly so. But as all the papers were not in hand at one time, to enable the committee to institute a comparison, they are not responsible for the unsatisfactory product, nor responsible for the delay. One paper, the report of Dr. R. L. Payne, Jr., of Lexington, on the "Progress of Surgery" was found, in Tarborough, several months after the Society adjourned.

This may not be the proper place to say it, but there is no doubt that the papers presented to our Society are not as good as they should be.

The adverse criticisms from time to time aimed at us do not seem to have had the effect of drawing out our best talent. We need not be disappointed at not producing volumes of the same value as those sent forth by the American Gynecological Society, for instance, but our pages should not indefinitely be occupied with compiled paper, stale enough before they are read to go into the waste-basket. Original matter there can be in abundance. Hundreds of our doctors have during the year, made observations of importance to the profession. We venture to say that a clinical portraiture of the cases occurring in general practice, if written in a scientific and honest spirit, leaving out the "wonderful" cases entirely, would be read by more journals, than the best compiled essays possible to be written. It is a mistake to believe that the examples of disease found in our daily rounds are less important than those noted in hospitals. The one thing which adds more interest to hospital cases, is that they are narrated more systematically and minutely, because there are certain rules required to be observed, and because the case-books are open to inspection; but if general practitioners will only

take the same pains, (and who among them will be willing to admit that he does not take more) they would find their case-books plethoric with good things for each session of the Society.

We hope that the 1884 meeting will be favored with more evidences of professional literary advancement, and if what we hear is true we may expect better things.

HOT URETHRAL INJECTIONS IN GONORRHOEA.—Dr. E. L. Keyes in the March number of the *Journal of Cutaneous and Venereal Diseases*, records some experiments with recently recommended remedies in gonorrhœa, among which he mentions hot-water urethral injections, giving a few cases in illustration. He says my impression of hot water treatment based upon these few cases is that they are not only useless but dangerous in many instances, especially in fresh gonorrhœa in a virgin subject. In the case of old sinners, whose urethral canal has been toughened by several previous inflammatory attacks, they appear to be harmless, sometimes even efficient. He finally concludes that the hot-water treatment of gonorrhœa is unreliable.

If properly used the hot water treatment is of great service. It should be used by injection into the urethra, and by immersion of the genitals in hot-water (100° F). In the early inflammatory stage of the most inflammatory cases this treatment reduces the frequent desires to micturate, but cannot be relied on to check the discharge. So far from lighting up cystitis, in our hands it has had the opposite effect. This treatment seems to be an old one, as Dr. Keyes says he saw Maisonneuve use it in the Hotel Dieu, in Paris, in 1865. It deserves extended employment, before it is condemned.

SYPHILIS OF THE BRAIN AND ITS MEMBRANES.—The articles on the above subject appearing occasionally in the *Boston Medical and Surgical Journal*, in the form of lectures, by Prof. H. C. Wood, of Philadelphia, are very valuable, and gives us incomparably the most lucid and practical presentation of this important subject to be found in any language.

REVIEWS AND BOOK NOTICES.

HAND-BOOK OF ECLAMPSIA, or Notes and Cases of Puerperal Convulsions. By E. MICHENER, M.D., J. H. STUBBS, M.D., B. THOMPSON, M.D., R. B. EWING, M.D., S. STEBBINS, M.D.

Here is a book of 68 pages, $3\frac{1}{2}$ by $4\frac{1}{2}$ inches with the names of five authors on the title page. It gives an account of 44 cases of puerperal eclampsia, showing that the largest number attacked and the greatest mortality was among the primipara; that the largest number of attacks was during labor.

In the good old time, when pregnant women were bled during the latter months of pregnancy, puerperal eclampsia was very rare. A single case occurred in 1815 in the neighborhood from which these cases were drawn, but "during the middle portion of the century, women in their naughtiness, and in obedience to an absurd and ridiculous custom, have voluntarily contracted their waists, and consequently, the abdominal space, to about one-half their natural capacity." * * * * * "It then became a fact, that just so far as the corset was drawn tighter, just so far as blood-letting was simultaneously neglected during pregnancy, just so far has puerperal eclampsia increased." (The latter quotation by the authors in italics). The authors are seriously striving to restore the "lost art" of blood-letting, and we must commend the modesty of their endeavor.

A NEW ENGLISH DICTIONARY ON HISTORICAL PRINCIPLES, &c.
 Edited by JAMES A. H. MURRAY, LL.D. Macmillan & Co.

While it is not strictly within the scope of a medical journal to notice a dictionary not specially devoted to medicine, yet doubtless there will be some of our readers who would like to know something about this great work.

It is a stupendous undertaking, as the following items will show: The first part is a volume of 352 triple-column pages the size of Littré's Dictionary, from A to ANT. This is one-fourth of the first volume, and the work is to be completed in six volumes of about 1500 pages, and will cost, unbound, about \$78.

The appearance of this dictionary is a great literary event, as its forthcoming has been promised many years. By the preface we learn that the scheme originated in a resolution of the Philological

Society, in 1857, at the suggestion of Archbishop Trench. The historical method has been adopted in the treatment of words, so that each word is followed in all its developments, going back as far as the 14th century. To accomplish this 1300 readers have lent their aid, and have brought together $3\frac{1}{2}$ million quotations from all writers whatever from the 16th century down to the present time. Many American scholars have been among the contributors. The Rev. Dr. Pierson, of Ionia, Michigan, has sent 36,000 quotations and two others have sent 10,000, and others 5,000 each.

It will be readily understood that this dictionary can never be a rival of Worcester and Webster, but as a dictionary for the philologist it will be incomparably better. To give an idea of the treatment of individual words take **ABORTIFACIENT**. First the pronunciation is given in arbitrary signs, quite different from those commonly in use. Then the derivation, and the part of speech. Then follow the quotations to give the authority for the word. In this case the history goes back to 1875 (rather a surprise this is, as we thought this word of much older origin) and quotes *Wood's Therapeutics*. The dates of the writings quoted, are printed in bolder face type so as to catch the eye. The word **ABORTIONIST** goes back only to the 1872 edition of *Thomas' Diseases of Women*. This may be accurate as to the written record, but the word had a popular place years before. It was certainly used in connection with the abortionist Restelle in Bedford's lectures.

Further as to some words we have encountered in a short examination.

ABELMOSK is defined as being "A genus of plants of the order *Malvaceæ*, of which one species (*A. Esculentus*) is cultivated in the south of France for its pods." One would hardly suspect that it was the well-known *Okra* referred to, a vegetable much prized, and found upon the tables of at least ten of the Southern States.

ABSORBABILITY, used by Sir H. Davy 1812, chemically ; H. C. Wood 1875. **Acclimation** by E. H. Kane, 1853.

ADENDOID, as applied to tumors having the appearance of a gland, is as recent as *Klein's Handbook Physiol. Lab.*, 1873, or *Bryant's Surgery*, 1878.

ALBUMEN is preferred to *albumin*, the former from the Latin, the latter from modern French.

ALIENIST, one who treats mental diseases ; a mental pathologist ; a "mad doctor" had its origin in 1864, in *Social Sci. Review*.

ANALGESIC, adj. Tending to remove pain. Sub. Medicine that removes pain. Attributed to Wood's *Therapeutis* 1875. The editor suggests the analogical equivalent ANALGETIC to agree with Anesthetic, as a better word.

ACUPUNCTURE, we notice is an ancient word, and was spoken of by Bonet in 1684 as a method of cure in gout. But more surprising still do we find that in *Darwin's Zoönomia*, the volume one would hardly search for surgical suggestions, we find (1801) "In cases of strangulated hernia, could acupuncture * * * * * be used with safety?" The idea of acupuncture of a hernia with a hypodermic needle is here practically antedated by three-quarters of a century.

The word ALPHOS is given, meaning a dull-white leprosy; but ALPHOSIS, the act of becoming white-spotted, although given in as recent a work as *Quain's Dictionary*, is not mentioned.

ANÆSTHETIC, a word now so well-known it is difficult to realize that it was first used by Sir J. Simpson in 1847, as connected with the production of insensibility.

It is indeed a great pleasure to spend a few hours with this volume, and to the student of our language it will be really a priceless gift.

LEGAL MEDICINE. By CHARLES MEYMOTT TIDY, M.B., F.R.C.S.

Vol. III. New York: William Wood & Company, 56 and 58 Lafayette Place. 1884. Pp. 321.

Two volumes of this valuable work have already appeared as parts of Wood's Library for 1883, and this is the first installment of the same library for 1884.

Whatever may be said about the dryness of other departments of medicine, it is not applicable to medical jurisprudence. The vast bulk of the matter here presented, is beyond the domain of speculation. Here we have the ripened fruit, the established principles, which have been abstracted from the mass of theory, in a domain where two professions can work together.

The present volume treats of Legitimacy and Paternity; Pregnancy; Abortion; Rape; Indecent Exposure; Sodomy, Bestiality, Live Birth; Infanticide; Asphyxia; Drowning; Hanging; Strangulation; Suffocation.

Notwithstanding the excellent works of Ogston, and Taylor, this volume has many points of superior merit. The chief one is, leav-

ing out the attractive style, the selection, and arrangement of illustrative cases. These cases are not intercalated in the text, but appended to the proper chapters, in smaller type, with conspicuous catch-titles in broad-face type. These references can be consulted separately, as the appended number leads the reader to the appropriate page.

As a book of reference for the lawyer or the doctor, it is admirably adapted; particularly the junior practitioner who finds himself called upon to give testimony before courts will find here the very volume he needs. It is clear, practical, and helpful in every respect.

THE CINCHONA BARKS: PHARMACOGNOSTICALLY CONSIDERED. By FREDRICH A. FLÜCKIGER, Ph.D. Translated by FREDERICK B. POWER, Ph.D. With eight Illustrative Lithographic Plates and one wood cut. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884. [Price \$1.50.]

The cinchona barks are eminently deserving of the important and accurate treatment they have received at the hands of Professor Flückiger in this volume. Works on the cinchona barks heretofore presented to the profession have been too elaborate for any but specialists, and too expensive for any but well-endowed libraries. We have here, though, a complete account of the cinchona, historically and chemically, with excellent lithographic illustrations, and within the limit of a little over a hundred pages of descriptive text.

When we consider that the annual crop of cinchona bark is worth nearly $7\frac{1}{2}$ million of dollars, its commercial importance is more apparent. Only one drug—opium—attains to still larger sums.

The immense commercial energy which has been brought to bear upon this drug, has attained its vital force through the enthusiasm of botanists. These men were real heroes,—men who have risked their lives in the forests of South America to determine the source and origin of the precious bark, the profit of which accrued only to the merchants.

It is recorded that in 1640 Dr. Juan de Vega, physician to the Count and Countess of Chinchon, on his return to Seville from Peru, sold the Jesuits bark he brought home with him for \$100 a pound; now thanks to the commercial energy of our modern times we can get a pound of the alkaloid for less than half the sum.

We notice one item which we do not remember having seen in

Briquet's "Du Quinquina", that in 1745, the Count de Lagaraye perceived the deposit of a salt from an extract of cinchona, being the first recorded observation on the crystallizable portions of bark.

The introduction of *cuprea* bark, has brought to light what to quinologists is a surprising fact, that quinine and the allied bases are not confined to the genus cinchona. Cuprea yields an average of 2 per cent. of quinine and has the advantage of only a small quantity of associated alkaloids, making the separation of quinine less troublesome.

Prof. Flückiger has done a valuable service to physic and pharmacy for the excellent monograph.

HUTCHINSON'S ILLUSTRATIONS OF CLINICAL SURGERY. Fasciculus xvi. Plates 59 to 62. P. Blakiston, Son & Co., Philadelphia. Price \$2.50.

This is the least entertaining and instructive of the fasciculi for the second volume of this work, but this is only a comparative statement; for as the subjects treated are so well illustrated in the numerous new works on general surgery, that specimens of fractured bones lose somewhat of their interest, and heretofore we have had only unique cases.

The first subject illustrated in this fasciculus is that of the *Fungating Form of Rodent Cancer*, in two chromo-lithographic figures, and on the same plate a peculiar form of epithelioma. Mr. Hutchinson's success in treating the former disease with chloride of zinc paste is very encouraging. He applies the strongest chloride paste over the cancer, and on the fourth day makes deep incisions into the slough, and introduces pieces of worsted covered with the paste to the bottom of them. In this way a deep eschar is formed. If the fungus sprouts again, the paste is again applied. As in one of the cases illustrated, there was a suspicious recurrence, but the sore only proved to be a small hard-edged ulcer, not bigger than a six pence. This was again destroyed, and the scar remained sound for several years afterwards.

Various examples of fracture are also illustrated. It seems like a very hackneyed subject, but fractures cannot be too well understood. Very few physicians have the good fortune to get a post mortem view of their cases. He gives two examples of ossific union of the patella, a rare pathological appearance.

The most interesting fracture examples shown, are results after intra-capsular fractures of the femur.

The first is an intra-capsular fracture close to the head of the bone, with secondary absorption of the neck. The head fits close on the shaft, and is slightly below the level of the great trochanter. There is fibrous union and there are also some evidences of rheumatic arthritis. Such arthritis is common after injuries.

He gives another example of a recent fracture just within the capsule and without any displacement whatever. The fracture gapes a little in front, but posteriorly the periosteal investment of the bone is not torn through. In this instance it must have been almost impossible to detect the fracture during life. There could not have been any shortening whatever. A little eversion and inability to use the limbs were probably the only symptoms. The bone appears to have been of a non-senile adult, the neck being very oblique. No treatment beyond rest would have been necessary in this case, and no doubt bony union would have resulted.

Mr. Hutchinson's *Illustrations of Clinical Surgery* is, we find, very little known by the general readers of medicine. The high price of the work has much to do with this, but for those physicians having a varied practice in the larger towns, it would frequently present lucidly an important lesson, the pecuniary outcome of which would cause the price of the book to sink out of sight.

In four more numbers the second volume will be complete.

THE LIST OF PHYSICIANS REGISTERED IN LOUISIANA.—Through the courtesy of the Secretary of the Louisiana Board of Health, we have received the *Daily Capitalion-Advocate* containing the official list of registered physicians for that State. It takes up eighteen columns of the *Advocate*. In this registration there has been no exclusion of irregulars, but all diplomas have been accepted provided they issued from admitted respectable schools, whether homœopathic or eclectic.

It was a well-timed movement which gave North Carolina a Board of Examiners, free from all the trammels which have affected legislators of a later day with a so-called liberal sentiment in favor of all schools.

THE MEDICAL DIRECTORY OF PHILADELPHIA for 1884. Edited by SAMUEL B. HOPPIN, M.D. Philadelphia: P. Blakiston, Son & Co. 1884. [Price \$1.50].

This is a small 8vo volume of 205 pages, containing the names of Medical Societies, Hospitals, and Dispensaries, a list of druggists, dentists, and doctors, all admirably arranged for reference.

STUDENT'S MANUAL OF THE DISEASES OF THE NOSE AND THROAT, etc. By J. M. W. KITCHEN, M.D. New York: G. P. Putnam & Sons. 1883.

This is a handy volume, in flexible muslin, beautifully printed in large clear type and on good paper, and illustrated with several very good wood-cuts. It is concisely written, and we can recommend it as a reliable manual.

PALLISER'S USEFUL DETAILS. By Palliser, Pallisser, & Co., Bridgeport, Conn.

Palliser's Useful details are published for the benefit of the builder, mechanic and all people interested in the Building Arts. They embrace a variety of constructional Drawings for all classes of work—exterior and interior—pertaining to the erection of buildings of every description, and such as never before published. The designs shown are a free adaption of the so-called Queen Anne and other new and popular styles. Each plate is worth the price charged for the whole, to any one requiring any ideas for the new, artistic and useful, be it ever so little.

THE VIRUS OF HYDROPHOBIA.—M. Pasteur claims in a communication to the Paris Academy of Sciences, on Feb. 26, that hydrophobia can be communicated to a dog by inoculation with fragments of marrow or of nerve taken from a mad dog. He also stated that he had rendered twenty dogs proof against the disease by inoculating them with a modified virus. We hope that M. Pasteur will be able to prove his claim with more success than in some of his previous work.

CURRENT LITERATURE.

ECZEMA.

By LOUIS A. DUHRING, M.D.

Eczema, popularly known as *tetter*, may be defined as an acute or chronic inflammatory, non-contagious disease of the skin, characterized at its commencement by erythema, papules, vesicles, or pustules, or a combination of these lesions, accompanied by more or less infiltration and itching, terminating either in discharge with the formation of crusts, or in desquamation. The disease shows itself in such a variety of lesions as to render the construction of a proper definition a difficult matter; the definition presented above, however, embraces the essential and characteristic lesions. The lesions may be divided into primary and secondary; among the former, erythema, vesicle, papule, and pustule, or a combination of these, may be mentioned; among the latter, crust, fissure and scale. The disease is a protean one. The subjective symptoms are burning or itching. The course of the disease may be either acute or chronic. It is more liable to relapses than any other disease of the skin, and these may occur in any variety, and to any extent.

There are four principal varieties: eczema erythematosum, eczema vesiculosum, eczema papulosum, and eczema pustulosum.

Eczema erythematosum is a distinct inflammation of the skin, characterized by an erythematous inflammatory surface, with more or less infiltration, swelling, and itching, terminating in desquamation. In this country it is a common variety of the disease, not, as a rule, acute, but having a tendency to become chronic. It remains, generally, the same from beginning to end, and does not incline to run into other varieties. Slight moisture may, at times, be present, but the lesion, as a rule, remains dry.

Eczema vesiculosum appears in the form of pin-point to pin-head sized vesicles, usually on a red base. There is no grouping, but the vesicles tend to form variously sized patches. They appear often in successive crops, forming quickly, becoming distended with a yellowish, clear fluid, and rupturing in from twelve to forty-eight hours. The development is sometimes so fast that one is scarcely able to note the disease in the vesicular stage.

Eczema papulosum is characterized by the formation of pin-head to small split-pea sized papules, discrete, confluent, or in patches, accompanied by itching or burning. The subjective symptom of itching is usually so violent that the lesions soon become scratched and excoriated.

Eczema pustulosum exists in the form of well or ill-defined minute or small pustules, similar in their general features to the vesicles just described. It occurs most frequently in infants, children, and young persons. The common sites are the face and scalp.

There are several important sub-varieties, the chief one being *eczema rubrum*, characterized by the multiformity of the lesions, some being primary, others secondary. This form is usually the further development of one of the foregoing varieties, and presents a typical clinic picture, consisting of thickening and infiltration, with more or less redness of the surface, oozing, crusting, and scaling. The discharge soon forms into crusts, which adhere closely and often obscure the lesions. Clinically, it is a common form of the disease, lasting usually months or years, getting better and worse from time to time. *Eczema madidans*, or weeping eczema, is seen in connection with *eczema vesiculosum* and *eczema rubrum*, and is characterized by an oozing, weeping, or discharging surface.

Eczema squamosum, or scaly eczema, is also common, and is generally chronic. The scaling, as a rule, is scanty. *Eczema fissum*, or fissured eczema, occurs mostly about the hands and feet, especially the joints. *Eczema verrucosum* is so called from the papillary or warty condition of the lesions, and generally exists as a patch.

Eczema is also divided, respecting the pathological changes and the duration of the disease, into *acute* and *chronic*. The acute form occurs especially in children, and sometimes without treatment runs its course, ending in recovery in a few weeks. The disease, however, as a rule inclines to be chronic. The distinction between the acute and chronic forms is based rather upon the character of the pathological changes that take place than upon the duration of the attack. In the latter form the inflammation is often of a subacute type, and is accompanied by marked secondary changes.

Eczema is everywhere the commonest disease of the skin. It constitutes about forty per cent. of all skin diseases in Philadelphia. In Boston, of 5,000 cases collected by White, 2,242 were cases of

eczema. In New York, of 8,000 cases collected by Bulkley, thirty-three per cent. were cases of eczema; and in the statistics of the American Dermatological Association, there were 6,179 cases out of 16,183. The disease is found in every sphere of society, among the poor and the rich; at all periods of life from infancy to old age. It is at times hereditary, and is more common in light-haired than in dark-haired subjects. In some individuals there exists an inherent peculiarity of the constitution which predisposes to eczema. Where this tendency exists, the disease is liable to be provoked by various constitutional disturbances, such as disorders of the digestive tract, chlorosis, deficient excretion, gout, pregnancy, nervous exhaustion, and excessive mental strain. Among the local causes, cutaneous irritants, as mercury, sulphur, croton oil, tincture of arnica, dyestuffs, poison ivy, heat, friction, perspiration, alkalies, acids, soaps, and parasites may be mentioned.

It is a marked inflammatory disease, and in the acute form the changes are generally so rapid as to render their study difficult. In the chronic form there exists a chronic inflammation which it is difficult to distinguish from that found in dermatitis. The principal seat of change is in the rete and in the papillary layer of the corium. In the papular and vesicular varieties there exist respectively a circumscribed plastic infiltration and a serous exudation in and about the papillæ, the former giving rise to papules and the latter to vesicles.

The diagnostic points are, first, infiltration, swelling, and thickening of the skin; second, exudation, which is fluid in the case of a vesicle or pustule, and plastic in the case of a papule; and third, itching, which in the vast majority of cases is a distressing symptom. Eczema may be confounded with many diseases, according to the variety which is present. In the erythematous and vesicular varieties, it may be mistaken for scarlatina, especially when the eruption has appeared universally and rapidly in one or two days; also, with erysipelas, when the eruption has appeared rapidly on the face. But in regard to both of these diseases, the presence or absence of constitutional symptoms would aid in making a diagnosis. It may be also mistaken for erythema simplex, but in this affection there is absence of itching, swelling and œdema; also, herpes, but here the lesions are always grouped, and seldom rupture, while in eczema the vesicles burst and give rise to the formation of crusts. It may

easily be mistaken for *tinea favosa* of the scalp ; where this disease has existed for some time, pustules may form, and the picture may closely simulate chronic pustular eczema. But a microscopic examination of the crusts would render a decision. The vesicular, papular, and pustular varieties may, moreover, be confounded with scabies. This, however, is a progressive disease, growing rapidly worse from week to week, and besides, it appears at first localized between the fingers, and about the genitalia and buttocks. The presence of the burrow in scabies is, of course, a positive diagnostic point. Eczema must be distinguished from artificial inflammations, as produced by various irritants, as, for example, croton oil, mercury, arnica, turpentine, etc. In these cases the history, the form of the lesions, and the course of the disease suffice to establish the diagnosis. The diagnosis between eczema and syphilis is not, as a rule, difficult. The vesicular lesion is practically not met with in the latter, while the papular lesions are attended with less inflammation than in eczema. The pustular variety of eczema is more superficial, and the removal of the crusts does not reveal an ulcerated surface, as in syphilis, but merely an excoriation. In pemphigus vulgaris the lesions are much larger than in eczema, and occur isolated ; while pemphigus foliaceus, which resembles eczema, has a peculiar history and course of development. Pemphigus, moreover, in this country is exceedingly rare.

Eczema may be mistaken for seborrhœa, especially of the face ; but it must be borne in mind that seborrhœa is a sluggish affection, accompanied with hyperæmia, and not with typical inflammation. The diagnosis between eczema and psoriasis is not always easy, especially where the latter disease is not marked, and the scales are wanting. However, the history and the course of the diseases are different, psoriasis being more steady, eczema more variable. The lesions in the former are sharply circumscribed, ending abruptly ; while those of the latter generally fade away into the surrounding tissue.

Ringworm, occurring about the genitalia—especially the thighs—and extending up on to the abdomen, may, at times, closely resemble eczema ; but in ringworm the lesions are sharply defined, and their borders are more or less marginate. In ringworm, of the scalp, short, broken-off hairs may always be found, which, examined microscopically, show the fungus.

In sycosis, as distinguished from pustular eczema, the pustules will be found to spring from the follicles, and to be perforated by the hairs.

Eczema is a curable disease. The measures employed are both constitutional and local. In some cases constitutional treatment only avails. In acute cases, say of one to three weeks' standing, excellent results follow the use of saline aperients, as magnesia, sulphate of magnesium, bitartrate of potassium, sulphate of sodium, and Rochelle salt. For children, rhubarb may be specially recommended. Diuretics are also sometimes indicated, such as the acetate of potassium, the carbonate of potassium, and liquor potassæ. Alkaline mineral waters, as Carlsbad, are also useful. Tonics, as iron, quinine and arsenic, and cod liver oil, are also valuable. A few words as to arsenic, our most valuable remedy. It should be given with discretion; and much better results are to be obtained by the exhibition of small rather than of large doses. In the majority of cases, the best results will accrue from the use of not more than two-minim doses of Fowler's solution. The use of the remedy must be kept up for some time. In a case of chronic universal eczema, occurring in a boy eight years (one of the most obstinate cases that ever came under our notice in the University Hospital), local measures were of no avail, and the agent that effected a cure was arsenic. In certain forms of the disease, however, as in chronic eczema of the leg, where there is thickening, it is not to be relied on; but in the chronic papular variety, and in some forms of erythematous eczema, occurring in broken-down, debilitated subjects, where the nervous system is at fault, arsenic may be used with great advantage. It is indicated, as a rule, only in chronic, never, or rarely, in acute cases.

Local treatment is important and is always demanded. The variety of the disease should be taken into consideration, also the amount of surface involved, the region, duration, and the history. In the erythematous variety, usually met with about the face, much benefit may be derived from the use of lotions of carbolic and boracic acids; the former is of particular value, and may be thus used:

R.

Acidi carbolicæ, 3 ss.

Glycerinæ, gtt. xv.

Alcoholis, f 3 j.

Aquæ, f 3 iv.—℥.

Sig.—Lotion. Apply several times a day.

The following lotion of prepared calamine and oxide of zinc is also recommended.

R̄.

Calaminæ præparatæ, 3 ss.

Zinci oxidi, 3 ss.

Glycerinæ, f 3 ss.

Aquæ calcis, f 3 iv.—℥.

Sig.—Shake before using. Apply as a lotion three or four times a day.

Or the compound sulphide of zinc lotion, made as follows :

R̄.

Zinci sulphatis,

Potassii sulphureti, āā 3 ss.

Aquæ rosæ, f 3 iv.—℥.

Sig.—Apply twice a day, for ten minutes each time.

In the vesicular variety, in the acute stage, excellent results will often follow the use of black-wash followed immediately by oxide of zinc ointment. Oxide of zinc ointment is a valuable, mildly, stimulating, drying ointment, and is useful alone and also in combination with other remedies. Of the various dusting powders, the following is one of the best:

R̄.

Talci veneti, 3 iv.

Zinci oxidi, 3 j.

Amyli, 3 iij.—℥.

Sig.—Dusting powder. Apply freely.

Salicylic acid, ten or fifteen grains to the ounce of lard, and oleate of zinc, one drachm to the ounce, do well in some cases. The calamine lotion above referred to is also valuable in the vesicular variety.

Papular eczema, as a rule, requires strong lotions. Among the best is one of carbolic acid as follows :

R̄.

Acidi carbolici, 3 iss to 3 iij.

Aquæ, Oj.—℥.

Sig.—Use as lotion several times a day.

Thymol, one to three grains to the ounce of water may also be

mentioned ; and liquor picis alkalinus, the formula for the latter being as follows :

R.

Picis liquidæ, f 3 ij.

Potassæ causticæ, f 3 j.

Aquæ, f 3 v.—℥.

This is to be used diluted with water in the strength of one drachm to two or four ounces of water. The liquor carbonis detergens, or alcoholic solution of coal tar, will be found serviceable.

Strong sulphur ointments are also sometimes very valuable.

In the pustular variety, ointments of calomel, white precipitate, and sulphur, from one scruple to one drachm to the ounce of lard, may be recommended. In the squamous variety, tar is the most valuable, and may be used in the form of the oil of cade, one or two drachms to the ounce of lard, or in the form of the officinal tar ointment, or as the liquor picis alkalinus, mentioned above. Ammoniated mercury, fifteen to forty grains to the ounce, may also be mentioned as serviceable. Where large surfaces are involved, a remedy like tar should first be tried on a small patch, to determine whether it will agree.

In eczema rubrum of the leg, the rubber bandage may frequently be used with benefit. In concluding the subject of treatment, it may be added that there is no one remedy which can be positively relied upon to effect a cure in a given case, especially where the lesions are extensive.—*Philadelphia Medical News*.



DEATH OF DR. ALEXANDER WOOD, OF EDINBURGH, SCOTLAND.—The *British Medical Journal* announces the death of Dr. Alexander Wood, (26th Feb.) to whom the profession is indebted for the introduction of the hypodermic injection of drugs by the hollow-needle syringe. His claim to priority rests upon a paper published by him in 1855, entitled a "New Method of Treating Neuralgias by Subcutaneous Injection." In his earlier years he was closely associated, with Sir James Y. Simpson in his experiments with anesthetics.

THE DIAGNOSIS OF DIABETES.

The other day, meeting an eminent physician and falling into chat with him while inspecting Barnum's "Young Taloung," the so-called "white" elephant, the conversation ran on the pitfalls of practice arising for some of our cherished theories. During this turn of talk the question was put, "How do you determine in a case of glycosuria whether the patient has diabetes or not?" He looked at me with a steady, inquiring gaze, and slowly replied, "I look at him." Now, it struck me this was just about the best and the most sensible remark upon the subject that could well be made. Diabetes is a disease which prints its marks on the organism in such a way that, when its symptoms are detailed and the urine is examined and found to contain sugar, the conclusion is not far to seek. At chest-hospitals it is almost a rule to strip all the patients and examine the chest as a first preliminary, without premising one or two leading questions to the patient,—in other words, assuming that because a patient comes to a chest-hospital, therefore, there is present some mischief in the chest. So, when there are "Renal Hospitals," a day not so distant as to be over the horizon, it will probably become a rule to make an examination of the urine as the first step. And when this is done, how many patients will be found to have saccharine urine? A good many more than are actually diabetic. When some apex-consolidation is found, how do we decide upon whether it is old or new? We look at the patient and ask a few questions,—at least that is my way of approaching the difficulty,—after the stethoscope has had its words (which is often an inarticulate sound); and, dedend upon it, in maiadies affecting the whole system, as phthisis and diabetes undoubtedly do, it is a good and sound plan "to look at the patient." The trained eye is our main guide as to the general condition of the patient and his health or ill health. When a corpulent, florid-complexioned man, well-fed and vigorous, passes sugar in his urine, only a tyro could conjecture that he was the victim of the classical diabetes,—a formidable wasting disease. Between the matter of examining the sputum for bacilli in a case of lung-consolidation, to determine the preeise histological condition of the neoplasm, and looking hard at a man who has perceptible quantities of sugar in his urine, lies a mighty tract of knowledge. But still it is only what a medical man must command if he has either

to win the confidence of his patient or hold his own in the present battle for existence. When a patient looks haggard or worn, complains of muscular lassitude, feels his work growing too much for him, and is troubled with thirst (and sugar-thirst is infinitely less quenchable than salt-thirst), then the presence of sugar in the urine becomes of the highest significance ; and, though this perhaps will be regarded as rank heresy, relaxation from labor, a diminution of the tax upon the nervous system, is more important than the shallow line of avoiding everything that can be converted in the body into grape-sugar. It may be well to give the liver physiological rest as to its glycogenic function, until it has come round ; but that is not the whole of the pathology of diabetes ; while the proposal of a French professor to treat diabetes by feeding the patient on the flesh of carnivorous animals was about the height of shallowness and folly.—*J. Milner Fothergill in Philadelphia Medical Times.*

THE IMPORTANCE OF A BOARD OF MEDICAL EXAMINERS.

The following letter from Dr. A. L. Gihon, Medical Director in the Navy, and the editorial comments of the Editor of the *Journal* of the American Medical Association gives us some idea how other States stand in need of the excellent law we have. The editor evidently refers to West Virginia, and not Virginia.

To the Editor of the Journal of the American Medical Association:

SIR :—That I might not assume to possess a monopoly in the collection of eccentricities in medical acquirements, a friend, not in the Navy but a man of mark in the profession, too modest, however, to wish me to print his name, gave me a few evenings ago, these additional evidences of that “regular medical education which is presumptive evidence of professional abilities and acquirements :”

“The *oracle* was full of black cots.”

“diobrea.”

“Ambrose Pare was a distinguished New York Surgeon,” and

“Sore eyes,” the phonetic guise in which *psoriasis* appeared on a formal medical record.

I quote them as fitting companion pieces to the following :

“the mad Stone that I hav advertised is as fine a one as I ever

seen I hav no use for that one as I hav got one besides as it is useful to thos who has non when they need it it is as larg as 3 inches through and very wite addres.

.”

I appeal to the members of the Association whether it is not the duty of every one of them to *pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, “regular” as well as irregular.

ILLITERATE DOCTORS AND MEDICAL LEGISLATION.

Under the head of domestic correspondence in the present number of the *Journal*, will be found a short and characteristic letter from Dr. A. L. Gihon, U. S. N., which contains further evidence (of which the world had abundance already) that some graduates of medical colleges are very illiterate, and closes with an earnest request that every member of the American Medical Association will “*pray*, if nothing else, that wisdom and courage may be given the Legislature of the State of New York to enact the law that will put that great commonwealth in line of battle with Illinois and West Virginia in the war against medical ignorance and incompetence, ‘regular’ as well as irregular.” Inasmuch as our enthusiastic representative of the medical staff of the Navy has improved every opportunity, during the last few years, to show the gross ignorance of many doctors holding diplomas from some of the oldest and most respectable medical colleges in this country, it seems a little singular that he should ask the great body of the profession to engage in *prayer* for the enactment of more laws establishing State Boards, whose members are required to accept the diplomas of these same medical colleges as sufficient evidence of qualifications for a State license to practice medicine. The war that such boards can wage against “medical ignorance and incompetence,” will never amount to more than light skirmishing along the outposts, and is hardly worth *praying* for. Had he asked the members of the Association “to pray” that the Legislature of every State may have sufficient “wisdom and courage” to enact laws similar to those in Alabama,

North Carolina and West Virginia, by which every man or woman proposing to enter upon the practice of medicine, shall demonstrate his or her qualifications, under a thorough examination by the State Board, without any regard whatever to medical college diplomas, we could have joined in the general prayer meeting with some degree of enthusiasm.—*Journal of American Medical Association.*

VIRGINIA BOARD OF MEDICAL EXAMINERS.

We rejoice with our friends in Virginia over the passage of the bill creating a Board of Medical Examiners in that State. By the terms of the law no person shall, after January 1st, 1885, practice as a surgeon or physician, for compensation, without having first obtained a certificate from this Board, and cause his name to be registered in the manner prescribed.

The bill provides that the Board shall consist of "men learned in medicine and surgery, and shall be appointed by the Governor on the first of November, 1884, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia."

This is truly a great triumph, more especially when we consider that there was a bill introduced into the same Legislature, to grant a large subsidy to the Medical College of Virginia, on the condition that each Senator should be entitled to name a medical student from his district, who would be entitled to free medical education at that College. When we first saw this project mentioned we could hardly believe that it was meant in seriousness, but we see that it required the influence of some of the strongest men in the State to kill it. Surely the Faculty of the Virginia Medical College could not have given such a hurtful and unjust movement any considerable endorsement! We are glad, therefore, that great good has been done to the profession, when such a heavy blow was being aimed at it. So far as we have had opportunity to judge the Virginia law is in some respects better than ours. Everything will depend, of course, upon the fidelity of its execution, for we know that in our State our law gets its chief power from the unflinching manner it has of late

years been applied, and as a consequence, to the moral support which such conscientious work, extracts from the general public.

The colleges of Virginia need not be afraid of a Board of Medical Examiners if they are as thorough as the University of Virginia, or as the Medical College of Virginia was in the days when we listened to the charming lectures of Gibson and Tucker and the faculty of that date.

Truly the work of medical reform is getting its most substantial support from the South. We can now point with pride to North Carolina, Alabama, West Virginia, and Virginia, for their laws separating the examining from the teaching bodies, or rather making them practically independent of each other.



THE "BENEFICIARY SCHOLARSHIP" SYSTEM.

The "beneficiary scholarship" business which for so long a time has escaped the public gaze, and for which reason we had hoped had been effectually cured by the vigorous attacks made upon it, it seems was not dead, but only smothered.

Just after the war, many deserving young men, whose medical studies were interrupted by their service in the Southern armies, were helped by beneficiary scholarships. Indeed so popular did the idea become, that several Colleges boldly published in their Announcements their willingness to take a limited number of students at a reduced rate, until at last many of these "institutions of learning" had classes largely composed of "beneficiaries." The beneficiary feature proved to be a source of corruption, opening wide the gates of several colleges to all sorts of students, and sending out to the world the worst prepared physicians that ever disgraced the profession. The evil was so enormous that the Medical College Association was driven to adopt a resolution that not more than five per centum of a medical class should be beneficiaries, and that those beneficiaries, should be unsolicited, and that they should be certified to be deserving, indigent young men.

It was not long before the Medical College Association dropped to pieces, and this is not strange, for the history of societies could

hardly furnish an example of a weaker body than it was. It was plain to the profession that earnest reform leading to uniformity of standard of education, could not be accomplished by such a body.

We had not suspected, though, that a removal of these feeble restrictions had been working such a shameful lowering of standards, such shocking prostitution of the powers of a college, as has been shown by Dr. D. W. Yandell, to have been practiced in Louisville, by the Louisville Medical College. Dr. Yandell is prepared, by documentary proof, to show that a regular system of solicitation of "beneficiaries" has been going on. That "scholarships" have been offered, and flattering compliments bestowed upon persons by members of the College Faculty, to ensure success in their solicitations.

This does not distress us in North Carolina as much as it would if we had no Board of Medical Examiners to defend ourselves, but it is serious enough, and every thinking man should lend his aid to break up such practices.

We hope that this state of affairs may exist only in this one college in Louisville, but in the light of the present revelations we should not be surprised if another city besides Louisville, judging by the number of the rejections of applicants by the North Carolina Board of Examiners, also partook of similar discredit.

May we not take this lesson to ourselves in North Carolina, and resist the temptation to have a medical college, until we can have one well endowed? Hungry professors must be fed, and so long as matriculants are scarce, the standard of scholarship would stand but a sorry chance with "the wolf at the door." We can do ourselves and our young friends good, by patronizing only such colleges as have shown themselves worthy of support, by the good work they have done. There is no difficulty in finding such colleges.

Dr. Yandell deserves the thanks of the profession for taking such a fearless stand against these gross abuses, and we have little doubt that he has stricken a successful blow.



VEGETABLE RENNET.—*Withania Coagulans* is the plant used in India as a substitute for animal rennet, as cheese made by means of the latter is not saleable in India.

CERTAIN UNTOWARD EFFECTS FOLLOWING THE ADMINISTRATION OF TURPETH MINERAL.

Drs. N. A. Randolph and A. E. Ronssel have recently experimented with the administration of turpeth mineral (*Medical News* March 8th) and have found it followed by unexpected symptoms. The drug was administered to eight well nourished men, in average health, in five-grain doses and as emesis did not follow within half an hour, three grains additional were given, with the result of inducing vomiting, more or less copious, within twenty minutes after the administration of the second dose. Beyond a continuation of retching for some time, and a general complaint of a sense of burning in the throat and fauces, nothing unusual was observed at the time, and but little depression immediately followed the emesis. On the following morning attention was called to the condition of five out of the eight men. A rather violent diarrhœa had followed in from ten to twenty hours after the administration of the drug, attended by much griping and a rather unusual amount of constitutional depression. Each of these five men had passed in the twenty-four hours succeeding the exhibition of the drug from eight to fifteen stools. These stools at first resembled those of calomel but eventually became yellow. The diarrhœa was checked by appropriate treatment and the cases progressed favorably to recovery. In the first few stools minute particles of turpeth mineral were found showing that its elimination by emesis had been far from complete, and that the drug had been from ten to twenty hours in contact with the tissues and fluids of the digestive tract. In one case there was well marked salivation.

The doctors draw the following conclusions from their observations :

1. That a dangerous quantity of turpeth mineral often remains in the stomach after emesis.

2. That this drug possesses sufficient toxic and irritant properties not only to demand from the profession much more than usual caution in its administration, but to condemn its use where the exhibition of any other emetic is practicable.

3. That it should not be placed in the hands of the laity.—*Maryland Medical Journal*.

SORE THROAT IN CHILDREN.

Henry Ashby, M.D., M.R.C.P., (*Practitioner, London, December*), mentions four principal varieties.

1. Simple tonsilitis. 2. Scarlatinal tonsilitis. 3. Pseudo-diphtheritic. 4. Diphtheria.

Weakly and serofulous children are especially subject to the first. It is oftener seen as a complication of alimentary disorders, as those of liver and stomach, than of the respiratory tract, as bronchitis and laryngitis. It frequently precedes rheumatic attacks. It may be the result of the scarlatinal poison. In proof of this, he cites an interesting series of eight cases occurring in a hospital ward within a few days. Several nurses also took the disease. The first patient attacked, it was found had been exposed to genuine scarlatina a few days before. None of the cases had an eruption. One, a patient in previously bad condition died. No insanitary conditions prevailed.

In view of the difficulty—at times the impossibility—of diagnosing scarlet fever from simple tonsilitis, the writer recommends the isolation of all children with febrile sore throat as long as faucial congestion remains. The points in favor of scarlatina are: the presence of vomiting and diarrhœa in the stage of invasion; a pulse of 130-160; not necessarily a high temperature; marked injection or the uvula pillars of the fauces and tonsils. Later, the enlargement of the cervical lymphatics, with tenderness; the implication of the nasal mucous membrane, and a yellow exudation over the tonsils and uvula, make the diagnosis of scarlatina tolerably certain.

Under pseudo-diphtheria the writer includes a class of cases which are said to bear the same relation to diphtheria that epidemic tonsilitis bears to scarlatina. It prevails where diphtheria does, is attributed to sewer-gas and other poison. They differ from it in that the cervical glands are rarely involved, the membrane is less tough, the nasal mucous membrane unaffected, the urine does not contain albumen, the usual sequelæ of diphtheria are absent. The prognosis is always good. The duration is rarely over a week.

The sore throat of diphtheria is differentiated from anginose scarlatina, by the fact that in the latter we rarely have true membrane. A yellowish exudation may cover the tonsils, perforation and even sloughing of the palate may occur, and there may be much external

cellulitis, but the leathery, whitish, adherent exudation of diphtheria is absent. The amount of albumen in the urine of scarlet fever is usually slight ; in diphtheria it is often fifty per cent.—*Archives of Pediatrics*.

MEDICAL COLLEGE OF SOUTH CAROLINA.—The annual Commencement of this institution was held at the Academy of Music in Charleston on March 1st. The Dean, Dr. J. Ford Prioleau, made his annual report. From it we learn that the Faculty of this College have “rigidly insisted upon the period of three years being devoted to the study of the profession, inclusive of two sessions of Collegiate exercise.”

The Dean also remarked :

“They would also speak in commendation of the performance of the duties of the officers and pupils of the ‘Training School for Nurses,’ which has just been organized. Already the beneficial influences has been felt in the hospital, and we have reason to believe that owing to watchful diligence and care life has been saved, and we trust that in the full fruition of its ripening experience that its benefit will be felt not only here within this city but throughout every portion of this State.”

Dr. Joseph F. McKay, of Avera'sborough, N. C., received honorable mention, having stood third in the order of examinations.

DIAGNOSIS OF THE OVARY AFFECTED.—In a recent case of ovariectomy, Dr. Miller, of Florence, was able to determine the ovary affected by feeling through the vaginal walls the increased volume and force of arterial impulse given by the enlarged blood vessel leading thereto. No history of the case in its incipency could be had to rely on—the growth having been discovered for the first time by the patient herself after a confinement which alarmed her by its size. Nor could it be reached by the vaginal or rectal touch, percussion of the lumbar region gave no reliable information, indeed no difference was perceptible. There was but slight anteversion of the uterus its mobility free and length of cavity $2\frac{1}{2}$ inches and it was decided on the above grounds correctly.

NOTES.

SELLÉS ON QUEBRACHO ASPIDOSPERUM.—In the *Revista Med. de Sevilla*, Senor Serrano Sellés gives the results which he has obtained with this new remedy.

1. A woman, aged 70, suffered from attacks of dyspnœa depending on cardiac lesion; all the ordinary remedies had been tried without benefit. Four grammes of the tincture of quebracho, in 150 of water, were given daily; the pulse and respiration became steady, and the dyspnœa disappeared.

2. A woman aged 57, suffered from severe dyspnœic attacks, owing to insufficiency of the sigmoid valves. The respirations were 70 in the minute. Three grammes of the tincture were given in 130 of syrup and water; a table spoonful to be taken every hour. At the third spoonful the respiration had descended to 62, and at the thirteenth the dyspnœa had disappeared, and did not return.

3. A woman, aged 70, had attacks of dyspnœa from old standing cardiac hypertrophy. She was greatly benefited by tincture of quebracho.

4. A woman aged 45, who had valvular insufficiency, with frequent attacks of dyspnœa, was promptly relieved by quebracho. After one month the dyspnœa again appeared, but again disappeared quickly on the quebracho being administered.

5. A man, aged 40, addicted to alcoholic drinks, had cardiac hypertrophy with dyspnœa on slight exertion; he was much improved by quebracho.—*London Medical Record*.

THE QUININE OF THE FUTURE.—In an address by Prof. Lenbe, on the importance of chemistry to medicine (*London Medical Record*, February, 1884) he concludes with the following (flight into high science): "A word or two on quinine before concluding. There is reason for believing that in its complex constitution an atom group is present in the form of chinolin ($C_9 H_7 N$), and there are different hydrated chinolin bases, especially the hydro-chinolin derivatives in which methyl or ethyl groups are united to the hydrogen, whose action resembles that of quinine—one of these, for examples, kairin ($C_9 H_6 H_3 HON.C.H_3$), or oxychinolin-methyl-hydride, is a more intense febrifuge even than quinine itself; indeed, in this body we possess the true type of an antifebrile remedy."

A CAUTION ABOUT JEQUIRITY—After reporting a case of sloughing of the cornea after the use of jequirity, in the *Weekly Medical Review*, February 22, 1884, Dr. S. Pollak formulates as follows :

1. Jequirity is by far the best remedy which has been hitherto used for trachoma and pannus.

2. It does all, and more speedily, that has ever been claimed for purulent inoculation, minus the repulsiveness of the last remedy.

3. The infusion of jequirity must be used only when perfectly fresh. After four or five days it swarms with bacteria, when the danger of their entering the tissue and causing a septic state is very great.

4. Sterilizing the infusion requires much care and labor, and may not always be practicable. It will doubtless retard the decomposition, but it will not prevent it entirely.

5. The full therapeutic utility of jequirity will only be attained when chemistry shall have succeeded in preparing an alkaloid of it, which will keep, and the strength of it is properly known.—*Philadelphia Medical and Surgical Reporter*.

TONGALINE.—“ We take pleasure in calling attention to a few of the numerous testimonials received from reputable physicians in commendation of the new remedy for Neuralgia or Rheumatism.

“Tongaline or Liqueur Tongæ Salicylatus.—They represent the conscientious opinions of the subscribers duly formed after a thorough trial.

“ Our readers will note that this is not a secret medicine, and its sale is urged only through the prescriptions of members of the profession.

“ We solicit a trial of this preparation by every physician feeling confident of a favorable result.”—*Extract from January Number of Medical Herald, St. Joseph, Mo.*

“ROUGH ON RATS,” an arsenical proprietary preparation concerning the indiscriminate and reckless sale of which we have heretofore spoken in terms of deprecation, is reported to have given rise to the poisoning of a family in New Jersey during the past week. There is a suspicion that the poisoned was administered maliciously, and it is admitted that the suspected person found no difficulty in buying the preparation.—*N. Y. Medical Journal*.

ALCOHOLIC LEG-PAINS.—Dr. Clifford Albutt (*Br. Med. Jour.*,) says that these pains are commoner in women than in men; (in England gin-drinking is carried to horrible excesses among some classes of women) they are often tibial in distribution, but occur also often about the ankles and feet. They are usually associated with marked cutaneous hyperesthesia. He has diagnosed many cases of secret drinking by these pains alone. Indeed, if a woman were found to complain bitterly of pains in the legs below the knees, pains somewhat nocturnal in occurrence, and as severe as those of syphilitic periostitis; if she resented any free handling of the limbs; if, again, she lay with legs adducted, extended, and the feet pointed much as in lateral sclerosis, but without permanent rigidity; if for all their outcry there were no visible cause whatever, the tibiæ smooth and no more sign of spinal disease than perhaps a slight ankle-clonus, then I should almost without hesitation, infer that alcohol was the cause. Abstinence cures it.

NEURALGIA PENCILS.—So-called neuralgia pencils, “Mäigne Stifte,” are now being offered by a number of German pharmacists, especially in Berlin. They are said to consist essentially of a mixture of menthol, thymol, and eucalyptol, fused and cast in small conic pellets, which are fitted in a suitable handle. The forehead and temples are touched with the pencil. A slight impression of burning is at first produced, which soon gives way to a pleasant, cool sensation. Several pharmacists claim priority in this invention. Friedlander exhibited neuralgia pencils at the late Vienna Exhibition, and a year ago nerve-crystals were offered by Blaser, which were described in the *Pharmaceutische Zeitung* as consisting of a mixture of crystallized Japanese peppermint oil and camphor. These pencils, under the name of the “menthol cone,” were exhibited by Dr. E. C. Wendt at a meeting of the New York Neurological Society recently.—*N. Y. Medical Record*.

[For sale also by John Wyeth & Co., Philadelphia].

COCA.—Under the generic title of Erythroxyton, the last edition of the United States Pharmacopœia has officially recognized the Erythroxyton coca, which is known to have been used for ages by the natives of Peru and Bolivia as a stimulant, and especially to enable them to undergo protracted muscular exertion. The

attention of the profession was called by Weddell in 1853 to its usefulness as an accessory article of food, as a substitute for tea and coffee, since it produces, like them, effects of a gently stimulating character without possessing nourishing qualities of its own. A number of experimenters and clinical observers have confirmed this opinion and recommended its use in conditions of lowered vitality or extreme fatigue. It is probable that it also exerts some effect upon the kidneys, resulting in an increased flow of urine.

Dr. H. D. Hicks believes that the properties of this drug deserve to be better known to the profession. In a paper (*N. Y. Medical Journal*, February 23,) containing clinical records of three cases, its remarkable effects in relieving the sense of fatigue after extreme muscular exertion, and in sustaining the physical powers under unusual demands, and in weak heart, are well demonstrated. Dr. Hicks uses the remedy in his practice in order to prevent and relieve fatigue; to relieve pains in the back accompanied by the discharge of dark-colored urine; in dyspnoea due to weakness of muscles of respiration; for palpitation of heart due to dilatation or weakness of heart-muscle without valvular lesions; mental exhaustion and low spirits; depression of nervous system following sexual excesses, sick-headache, etc. Finally, he claims that it destroys the craving for alcohol, and that its habitual use as a part of the daily diet conduces to mental clearness and activity, freedom from fatigue, and sound sleep. These good effects were obtained from doses of half a drachm of the fluid extract several times daily.—*Philadelphia Medical Times*.

A NEW USE FOR SANTONIN.—A case under the care of Dr. N. Anderson (*Lancet*, November 10,) suffering with lumbricoid worms, reported that, as the result of his treatment, he had been relieved of his worms, and also that a long-standing gleet had ceased. The reporter thereupon recommends santonin for gleet, five grains rubbed up with an equal quantity of sugar of milk, to be taken twice a day in milk. It is possible, in the case reported, that the effect of santonin upon the gleet was due to a secondary, and not to a direct or primary action; however, there need be no difficulty about finding suitable subjects to try it upon. *Fiat experimentum in corpore vile*.—*American Practitioner*.

We regret to learn of the death of Dr. P. W. Young, of Oxford, and of Dr. J. L. Rucker, of Rutherfordton.

COMBINED ŒSOPHAGOTOMY.—Instead of treating imperforable, cicatricial strictures of the œsophagus, as recently recommended, by the establishment of a gastric fistule, Gussenbauer has in two cases attempted radical cure by "combined" œsophagotomy. By this is understood the opening of the œsophagus at the point of selection in the neck (Guattani), by which access to the stricture and its division by a small herniotome moving on a hollow sound are possible. The incision of the cicatricial tissues is an easy operation with such an instrument, is not followed by inflammatory results or bleeding, and the constriction can be completely removed,—a result which is not possible by simple dilatation ; dilatation must, however, be constantly practised as an after-treatment, as the only means by which a return of the stricture can be prevented. On the other hand, œsophageal strictures may be similarly treated through a gastric fistule, though in such cases the stricture must be limited to the cardiac orifice of the stomach. Even in such cases, however, the stricture could be at least as readily reached through an opening in the œsophagus. The clinical histories of both cases operated on by Gussenbauer are reported in the *Zeitschrift für Heilkunde*, iv. 5, 33, —S., in *Centralt. f. d. Med. Wissen.*, January 19, 1884, *Phil. Med. Times*.

FLUID EXTRACT OF SENEGA.—Pharmacists and physicians frequently complain of and send back this fluid extract as being "worthless" or "spoiled," because occasionally it gelatinizes. All good Senega root contains a large amount of pectin, and the better the root the more pectin it appears to contain ; or, at least, when the fluid extract is made from root of only fair quality, it is never the subject of complaint. But when the root is of very good quality and very strong in its sensible properties, the preparation gives the maker a great deal of trouble and letter-writing about it. A curious circumstance is, that in the writer's experience of twenty-five years and many thousand pounds of this preparation, he does not remember to have seen a single bottle gelatinize until after it had been sent out. This, and the circumstances that complaints are most common in winter, seems to show that the cold of transportation or of places where it is kept is the cause, and the object of this note is simply to say that the gelatinized preparation only has to be well warmed up to become as fluid as ever, and of course as good as ever. But there is much more to be said on the subject if it ever be reached in the review of the Pharmacopœia in these pages.—*Squibb's Ephemeris*.

DR. ROBERT T. COLEMAN.—Dr. Coleman died recently in Richmond; he served as Chief-Surgeon of Trimble's afterwards Ed. Johnson's Division in the Army of Northern Virginia. After the war he settled in Richmond and was elected to the chair of Obstetrics in the Medical College of Virginia.

THE BUSY PRACTITIONER AND LONG-WINDED ARTICLES.—The most wide spread and, at the same time, the most transparent adulation is that offered, by so many of the smaller journals, to the profession, in connection with the subject of "the busy practitioner" and "long-winded articles." Journals of size, like the *London Lancet*, the *British Medical Journal*, the *N. Y. Medical Journal*, the *N. Y. Medical Record*, etc., never have a word to say on these subjects, which in other pages are topics so favorite, so prominent, and so familiar. One finds in the pages of the journals just mentioned the choicest articles of classic authors, the subjects being carefully elaborated and presented in detail. Indeed, such writers would not accept space under any other conditions, knowing that it is utterly impossible for even the most erudite physician to present intelligibly and instructively any medical subject, unless this is done carefully and in detail. It is only the men that can say very little on any subject in medicine who have the effrontery to try and present any subject in a few paragraphs.

As to "the busy practitioner not having time for reading long-winded articles," such a statement is a piece of manifest "buncombe" and silly flattery, offered to the foolish among the profession by such journals as have not the space in which to offer carefully elaborated papers. There is no physician who is too busy to read good papers. Indeed, if he is very "busy," he is so because he has been a careful student of such literature. What he knows he knows well, and if he reads an article, he wishes to study the subject of it. It is such careful study of the masters that makes the practitioner "busy."

Of course there are a few medical demagogues in every community who resort to vile arts, to tricks and devices, to flattery, to covert advertising, etc., but they are not included, or worthy of being included, in any criticism. It is only to the true men of the profession that reference is here made; and these men, if "busy," are busy not because of having read miscellaneous paragraphs and foolish formulas, cut from medical briefs and almanacs, but because of their close study of the best papers of the best men.

The reader who turns from the paper of a writer because it is "long" is on the high and brief road to idleness, worthlessness and ruin. He has mistaken his vocation, and the sooner he gives it up, the better it will be, not only for himself but for his patients—and, above all, for his brethren. He is already a drone in the hive.

Velpeau did perhaps the heaviest work of his day in hospital, in college, in clientèle, and yet in his life he wrote eighty works. Trousseau, not less faithful in active work of all kinds, was also a prolific writer. So of Sir James Simpson, Sir Henry Thompson, Sir Spencer Wells; so of Mathews Duncan, Clarke, Williams, Roberts; so of Gross, Eve, Flint, Hammond, Thomas, Barker, Emmet, Sayre, Gouley, and a long list even in this country. They have been "busy," but they have read and written unceasingly; and such work it is that has made them "busy."

When one reads, as he does every day in the smaller journals, the statement made to the average practitioner throughout the United States, the doctors of eight or ten patients daily, and many of even less, that they are too "busy" to read long articles, but must read the little paragraphs (in such periodicals) as to what is "good" for something, what is he to do but smile? But if he has the misfortune to be an editor, there is one other thing he can do, must do—it is to expose the silly fraud herein mentioned, and to help men see the truth.—*Gaillard's Medical Journal*.

OBITUARY.

LUNSFORD P. YANDELL, M.D.

Dr. Lunsford P. Yandell, of Louisville, the son of a distinguished physician of the same name, died at his home in Louisville, Ky., on Wednesday, March 12th, in the forty-seventh year or his age. The cause of death was an attack of angina pectoris, from which affection he is said to have suffered frequently. Dr. Yandell was a native of Tennessee, but for the greater part of his life he was a resident of Louisville, where he received both his general and his medical education. At the time of his death he was the professor of the theory and practice of medicine in the University of Louisville and the senior editor of the *Louisville Medical News*. He was an eloquent teacher, a forcible writer, and in every way a man of weight in the profession and in the community."—*N. Y. Medical Journal*.

GEORGE ENGELMANN, M.D.

It is with profound sorrow that we record the death of Dr. George Engelmann, of St. Louis. He died in St. Louis, on the 4th inst., at 75 years of age. Dr. Engelmann was a native of Frankfort-on-the-Main, but St. Louis had long been his adopted home, where at the time of his death he commanded the highest respect as a physician.

It was in the department of botany that Dr. Engelmann achieved his highest distinction. In his twenty-fourth year his first contribution upon botanical subjects began, and he continued a faithful and accurate student and author up to the time of his death.

Dr. Engelmann was the highest authority in some special departments of botany, viz.: The Oaks, the Pines, the Cactis, the Yuccas, the Euphorbias, the Grapes, the Agave, the Cuscutas.

His contributions, conjointly with Dr. John M. Bigelow, on the American Cactaceæ, prepared for the Government Surveys for the Pacific railroad in 1883-4, is a complete guide to this important order of plants.

Only a few years ago he rewrote the entire genus *Pinus*, a work requiring such knowledge as he only possessed. This contribution was published by the St. Louis Academy of Science in a handsome pamphlet, illustrated by a beautiful lithograph of *Pinus Elliottii*, a new pine discovered by Dr. Mellichamp, of South Carolina, and thoroughly identified by Dr. Engelmann as a distinct species.

Several species of plants bear his name, and one sub-genus among the Euphorbias was named *Engelmannia* for him by Klotzsch, but with doubtful priority.

There is not a botanist in the country who has not enjoyed the help of Dr. Engelmann in botanical diagnosis. He was ever ready and courteous to reply to enquiries on botanical subjects, and many whom he had never seen, and had never heard of were the recipients of favors which he alone could give.

We trust that some able pen will put on record his life-work, which when told as it should be, will be a history of American botany for nearly half a century.

BOOKS AND PAMPHLETS RECEIVED.

Pallisser's Useful Details. By Palliser, Pallisser, & Co., Bridgeport, Conn.

The Reciprocal Attitude of the Medical Profession and the Community. Alexander Hutchins, A.M., M.D. Brooklyn, N. Y.

Clinical Surgical Cases. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1883.

Student's Manual of the Diseases of the Nose and Throat, etc. By J. M. W. Kitchen, M.D. New York: G. P. Putnam & Sons. 1883.

Annual Report of the Health Department of the City of Brooklyn, N. Y., for 1883. Brooklyn: Printed for the Corporation. 1884.

Hutchinson's Illustrations of Clinical Surgery. Fasciculus xvi. Plates 59 to 62. P. Blakiston, Son & Co., Philadelphia. Price \$2.50.

Transactions of the Massachusetts Medico-Legal Society. Volume 1. Number 6. 1883. Cambridge: Printed at the Riverside Press. 1884.

Annual Reports 1883. Department of Health of the City of Charleston, S. C. Charleston, S. C.: The News and Courier Book Presses. 1884.

The Medical Directory of Philadelphia for 1884. Edited by Samuel B. Hopkin, M.D. Philadelphia: P. Blakiston, Son & Co. 1884. [Price \$1.50].

Legal Medicine. By Charles Meyott Tidy, M.B., F.R.C.S. Vol. III. New York: William Wood & Company, 56 and 58 Lafayette Place. 1884. Pp. 321.

Optico-Ciliary Neurotomy, and Miscellaneous Surgical Cases. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1882.

Surgical and Other Cases of Disease of the Eye, Ear, Throat and Nose. By Francis L. Parker, M.D. From Transactions of the South Carolina Medical Association, 1882.

Transactions of the New Hampshire Medical Society at its Ninety-Third Annual Session, Held at Concord, June 19 and 20, 1883. Concord, N. H.: Printed by the Republican Press Association. 1883.

Contagious Pleuro-Pneumonia. Report of Proceedings at a Conference held at the Office of the Department of Health, Brooklyn, N. Y., January 8th, 1884. Prepared by the Commissioner of Health.

First, Second and Third Annual Reports of the Secretary of the State Board of Health of West Virginia for the Years Ending December 31st, 1881, 1882, 1883. By Authority. Wheeling: Chas. H. Taney, State Printer. 1884.

Annual Announcement of the Cooper Medical College Successor to the Medical College of the Pacific. San Francisco. Session of 1884. San Francisco: Alta California Book and Job Printing House, 529 California Street. 1884.

Transactions of the Medical Association of the State of Missouri, at its Twenty-Sixth Annual Session held at Jefferson City, Mo., May 15, 16 and 17, 1883. St. Louis: Ev. E. Carreras, Steam Printer, Binder and Publisher, 117 and 119 Locust Street.

The Cinchona Barks : Pharmacognostically Considered. By Freidrich A. Fluckiger, Ph.D. Translated by Frederick B. Power, Ph.D. With eight Illustrative Lithographic Plates and one wood cut. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1884. [Price \$1.50.]

Arrest of Development caused by Intra-Uterine Pressure. By H. F. Hendrix, M.D., Lecturer on Obstetrical Emergencies, in the College for Medical Practitioners, of St. Louis. Reprinted from the St Louis Medical and Surgical Journal, February, 1884. St. Louis: Medical Journal Publishing Company, 2622 Washington Avenue. 1884.

Contagious and Infectious Diseases. Measures for their Prevention and Arrest. Small-pox (Variola) : Modified Small-Pox (Varioloid) ; Chicken-pox (Varicella) ; Cow-pox (Variolæ Vaccinæ) ; Naccination, Spurious Vaccination. Illustrated by Eight Colored Plates. Circular No. 2. Prepared for the Guidance of the Quarantine Officers and Sanitary Inspectors of the Board of Health of the State of Louisiana. By Joseph Jones, M.D., President of the Board of Health of the State of Louisiana. (Extract from the Report of the Board of Health to the General Assembly of Louisiana, 1883-84. Baton Rouge : Printed by Leon Jastremski, State Printer. 1884.

NORTH CAROLINA MEDICAL JOURNAL.

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ORIGINAL LECTURE.

ON THE DYSPEPSIA OF EARLY LIFE.

By PROF. GERMAIN SÉE, Paris, France.

[Reported for the NORTH CAROLINA MEDICAL JOURNAL].

Dyspepsia, and atony of the stomach and intestines are observed at different epochs of childhood; at birth during lactation and dentition, at the time of weaning, and during the period of rapid growth. In all these stages of childhood we are wont to see, coupled with want of tone and functional power in the gastro-intestinal canal, obstinate disturbances in the evacuations; diarrhœa dominates the morbid scene, so that the study of the gastro-intestinal disorders of early life is not complete without a preliminary analysis of the pathogeny of diarrhœa.

PHYSIOLOGY OF DIGESTION IN THE NEW-BORN BABE AND IN CHILDREN AT THE BREAST.

In the gastric mucous membrane of new-born pups you cannot by the aid of the most delicate reagents demonstrate the presence of pepsin, and it is the same during the first week of life. It is not

till the second week that pepsin appears in appreciable quantity and it is not till the fourth week that it attains the normal proportion. But if this is so, how do young animals succeed in digesting casein? This is a question not easy of solution.

In the growing infant, and especially in the infant that nurses, the mucous membrane of the stomach contains a notable quantity of pepsine, and casein is readily transformed into peptones. The stomach of the infant contains also the special ferment which transforms sugar of milk, and which was discovered by Hammarsten, for extract from the parotid gland easily transforms starch into sugar, while an extract from the sub-maxillary gland gives only a negative result; this is the opposite of what takes place in adults. The respective action of the two glands is not changed by the pathological states of infancy such as diarrhœa and vomiting or even the thrush, although the power of the ferment is diminished. An infusion of the pancreas fails, during the first month, to transform starch, although it may cause the metamorphosis of albuminates (casein and fibrin) into peptones; it has also the property of decomposing the neutral fats. In intestinal irritations these functions appear to be lost.

In the meconium you never find biliary acids; bile is not formed; the elements are not complete till later; as soon as lactation is established you find in the discharges the various colorations indicative of bile.

During the first days of infant life, it is quite common to observe gastric, intestinal or pancreatic dyspepsia; some times under the form of vomiting, the vomited matters consisting of acids, the product of decomposition, and more rarely, of biliary and mucous matters; sometimes it is a mucous diarrhœa with unaltered green bile combined with fatty particles and fragments of casein. The characteristic of these dyspepsias is the upward or downward evacuation of milk and the products of decomposition. Colic and flatulence are always noted in these cases. The cortége of symptoms characteristic of inanition (to wit, of denutrition) soon reveals the matter of the malady, which cannot always be attributed to an alteration in the proportion of the different elements of the milk; still less can these dyspepsias be attributed to over-feeding with milk, unless associated with too great an abundance of ferments in the ingesta.

Often the digestive organs of the infant and their ferment-forming

glands are more at fault than the alimentation; we know in fact that a *prior condition of debility* prevents the formation of the ferments; the athrepsia so well described by my colleague, Parrot, is not merely an *effect* of vicious digestion, it is often also the *cause* of alterations of the peptic glands and consequently of the pepsine. During lactation and at a period sufficiently advanced, you will see infants, who without losing weight have all the symptoms of obstinate gastro-intestinal dyspepsia. Sometimes the cause is apparent in painful dentition, or in food of bad quality given in addition to the natural supplies, but sometimes the reason of these attacks of dyspepsia is not easily determined. The infants are taken with loss of appetite, colicky pains, with or without swelling of the stomach and colon; the evacuations are irregular, diarrhœa succeeding constipation; withal the tongue may remain clean. It is in vain in these cases to test the state of the nutrition by the scales; nothing is ascertained by this process, which often deceives the physician, for the scales gives only the gross weight which includes, with elements indispensable to the organism, such as the protein compounds, others such as liquids and fats which are of less utility. In these circumstances the attentive examination of the urine, the quantity of nitrogen contained in this fluid, (due regard being had to the azotized principles which are ingested) constitute a basis of appreciation much more rational and more certain, both of the vital forces and the integrity of the tissues. The appearance of the infant may long remain unchanged by reason of the intervals which separate these attacks of dyspepsia. After a variable period emaciation takes place in a manner to cause anxiety; the diagnosis becomes difficult and conjectural; tuberculosis of the lungs or meninges is feared, while in reality there is nothing but a profound and insidious perturbation of the digestive and nutritive functions.

The influence of dentition on the digestive functions is well-known, perhaps is even exaggerated. If, in fact, everybody is agreed in continuing, during this period, the milk diet, supplementing it with albuminous and starchy articles of food, only during the time of quiescence from the teeth, it is with the end in view to avoid the reflex influence of dentition on the alimentary canal.

The most grave period of the growing infant is the time of weaning. The sudden or gradual transition from a uniform alimentation to a regime diametrically opposite, is a very trying time to the

digestive organs. Without doubt the new dietetic principles which in general are composed of meat, albumen, starch, sugar, find already their respective ferments, such as ptyalin, pepsine and pancreatine; but, what they do not find is a stomach prepared, etc., to support an abundance of substances which are not alimentary or which are indigestible, such as tendons, aponeuroses, interstitial cellular tissue which are a tax on the digestive forces and exercise without profit the digestive fluids.

Therefore it is that at this time we have indigestions, even where there has not been excessive feeding, mucons or erapulous diarrhœas, lientery, cholera infantum; all being modifications of the same morbid type constituting gastro-intestinal dyspepsia. The indigestions are temporary, the diarrhœa often permanent, and if it carries off too much of the food principles, before their elaboration, the infant succumbs to lientery, that is, to complete apepsia, unless a more speedy calamity befalls it, such as a sudden alarming deperdition of all the intestinal liquids, including the pancreatic juice, and the bile, a complete expulsion of the gastric juices, and at the same time an exaggerated hyper-secretion which deprives the blood of its liquidity and its temperature, annihilating the circulatory forces; this is the tableau of cholera infantum. It is worthy of note that these grave perturbations are not always manifested immediately; often one, two, and even three weeks pass away without there being the least alteration in the health of the infant. Parents and the physician are encouraged; they consider weaning as successfully completed, when all at once and without any apparent cause, dyspepsia manifests itself under some one of its forms which I have indicated. Why this delay in the development of such grave accidents? We have to deal here with gradual failure of nutrition resulting from want of ability on the part of the stomach to separate from the alimentary melange offered it, the pure azotized principles, and to elaborate them by the gastric juice, which does not reach them till after having penetrated refractory membranes, themselves demanding a digestive elaboration. The provision for nutrition still exists, to-wit; that albuminous liquid of the circulation which has been so well described by Voit and which is not immediately exhausted by the daily drafts made upon it, or even influenced all at once, by the kind of food ingested. But when this *reserve* is used up then commences the terrible sequel of dyspeptic symptoms. This is my

explanation and this is the way I apply it to practice. To avoid loading the stomach with refractory products, I prescribe habitually raw meat suspended in broth made from lean meat, or in a soup made of dried legumes. I proscribe the usage of milk under any form whatever, at the same time I give as drink water containing some kind of alcoholic stimulant, and for these reasons; raw meat is meat deprived of all of its fibro-cellular elements; the azotized feculents are easy to digest and add *leguminose* to the action of the muscular fibrin; milk produces on the contrary, in many cases looseness of the bowels whose deplorable effect is to eliminate the alimentary principles before their absorption; but this last function (i. e. the retention of chyle till its complete elaboration) is one which should be protected above everything else, and this may be favored by the use of some mild alcoholic stimulant such as astringent wine, or by the use of prepared chalk with or without opium.

PERIOD OF GROWTH.

During the first years of growth viz: from 2 to 10 years, dyspepsia is rare and simple intestinal atrophy does not yet exist; but I have often seen supervene at this epoch of the child's life, two kinds of gastro-intestinal affections quite distinct; 1st. *embarras gastrique* with repetitions of climatal origin. The first kind of disturbance which one often observes in children consists in an acute dyspepsia, catarrhal in form, or rather in origin, which has been habitually described *embarras gastrique* (anorexia, nausea, vomiting, constipation, general malaise with or without fever); this *embarras gastrique* lasts several days, or appears two or three times a year especially during changes of climate or even sudden changes of the weather, and leaves the child in perfectly good health in the intervals of the attacks.

2d. *Intestinal Atony by Mechanical Obstruction*.—The other kind of trouble is entirely distinct from dyspepsia; it is an incomplete obstruction of the intestine, a kind of atony by obturation proceeding from the presence of polypi of the rectum, more rarely of hæmorrhoids. The child is constipated; the belly is inflated, the appetite capricious; when evacuation takes place there is much difficulty and great pain and often they are accompanied with pure blood or blood mingled with mucus; on examination the offending element (*corps au délit*) is found, to-wit: a mucus polypus of the

anus near the external sphincter; if you do not remove this, (an operation which is often necessary) it shrinks away and the disease disappears; but while it remains it produces a real hyper-secretion of the rectum and anus which causes much discomfort. Gentle laxatives and lavments ordinarily suffice temporarily to interrupt the progress of the disease.

DYSPEPSIA OF ADOLESCENCE.

Dyspepsia is rare during adolescence, but what is not rare is intestinal atony under its various forms, and the anorexia which is described as hysterical. Hysteria is in fact common in young girls from ten years upward. The anorexia of hysterics is often a part of the cerebral disorder of these unhappy beings, being a sort of mental alienation, unless indeed it result (as I have sometimes observed) from dilatation of the stomach.

Veritable intestinal atony is witnessed in both sexes, especially in little girls, under the form of simple atony, without cramps or spasms. These children have slow digestion, malaise, gaseous distension of the stomach and intestine and constipation. The appetite remains good and digestion is accomplished after a fashion. From time to time there is a diarrhœic crisis; a form of atony much graver, and more persistent is mucous entorrhagia. You see in chlorotic or hysterical girls a morbid state characterized by evacuations of concrete mucus, with severe pains, and considerable debility and emaciation. Many of these cases are attended with febrile or pseudo-febrile attacks which even simulate some of the continued fevers. We have simply to do with crises of irritation due to intestinal atony, with retention of fæces, and often attended with muco-membranous exudation. The treatment of this affection is very simple—evacuants should be used with moderation. The diet should be raw meat, with broths, roast meat, poultry, game, boiled or broiled fish, pea soup, or soup made from other legumes; milk is not generally well borne, eggs are not always easy of digestion, pastries are bad. As drink, Bordeaux wine with seltzer water or Vichy. As for purgatives, you should eschew salines, as well as drastics. If you give the latter, (such as aloes, podophyllin) you should combine them with hyoseyamus or belladonna to mitigate their action. Blonden's pill of euonymin (2 grains) and extract hyoseyamus, (2 grains) has been highly recommended for membranous entorrhagia and enterocolitis; rectal irrigations of cold water are sometimes of service.

SELECTED PAPERS.

THE ACTION OF THE HEART.

The short duration of the life of a theory in physiology has passed into a proverb; but when we consider the difficulty in dealing with all vital problems, wonder at this at once vanishes. Theories are suggested from time to time to put together, as it were, in a convenient form, the results of observations, to collect the data which, in an advancing science, accumulate about every important problem. It is not only reasonable, but also almost necessary, that theories should change as knowledge advances; and therefore the changeful character of physiological theories should not be a term of reproach, but rather an indication of the activity of the science. But to be useful, it should be distinctly understood that theories are made for facts, and not facts for theories. If this had been better grasped by former investigators, greater progress would have been made in the understanding of life problems, and many subjects would not have collected around them masses of elaborate theory, unsupported by sufficient observation. It is, however, cheering that the modern physiologist appears to understand this, and makes accurate observation take the first, and theory the second place.

It is also cheering to observe that, as one theory displaces another, it is, generally speaking, the triumph of the simpler; and that, as one problem is explained in such a way, there is often a possibility of applying to another a similar solution. There have been few questions which have agitated the mind of the physiologist so much as the action of the heart, the relation of one part to another, the influence of the nervous system, and the action of drugs upon it. Few have been worked at with so much energy, and few have produced more apparently conflicting information.

It is to this subject that we propose to direct attention, as it appears pregnant with thoughts which must have as great an interest for the physician as for the physiologist. That a great deal of work is being done on this subject, one need only refer to the recent communication of Professor Roy to the Royal Medical and Chirurgical Society to prove. If more proof were wanting, the current physiological literature, both of the continent, and, we are pleased to add, of our own country, would afford it.

It is a well known fact that, unless under specially favorable conditions, the heart of a warm-blooded animal ceases to beat immediately on, or very soon after, removal from the body; and any extended observation upon the action of this organ have been, up to a comparatively recent date, made almost exclusively upon the hearts of cold-blooded animals, especially upon that of the frog. This animal's heart, when removed from the body, will even, if unsupplied with blood, continue to pulsate for hours, and even days with apparent little alteration of its beat, provided that it be kept moist with serum of similar fluid, and be not exposed to extremes of heat or cold. The action is rhythmical, commencing at the sinus venosus, spreading over the auricles to the ventricle and bulbus arteriosus; it is, comparatively speaking, slow, and very strongly resembles a vermicular action. If the heart be stimulated by the prick of a blunt needle, or by an induction-current, an extra beat, differing in no degree from the normal, will be called forth; but, by increasing the strength of the stimulus, no extra effect is produced, and a series of rapidly interrupted shocks from a magnetic interrupter will not, as if we had to deal with a simple muscle, produce tetanus. The effect of the stimulus, therefore, is to call forth a peculiar action, and not a simple contraction. The stimulant will excite a mechanism which is either nervous or is inherent to the muscle itself.

The extraordinary effects of dividing up the heart, separating the auricle and ventricle from the sinus and from one another, is also well known, the parts beating in much the same way as the whole; the only difference being that the rhythmical action of the ventricle, after section appears to be less easily renewed than that of auricles, and that of the auricles than that of the sinus. The bisected heart also continues to beat as though whole. The only part of the heart which seems to be unable to take on a rhythmical action is the very apex of the ventricle (it will be seen further on that this is an apparent, not a real difference). In the frog's heart, minute ganglia have been demonstrated, chiefly localized in three situations, viz., at the sino-auricular junction, in the wall of the auricles (interauricular) and in the auriculo-ventricular junction; but in the lower portion of the ventricle towards the apex, no ganglia have been found. A very tempting theory at once would connect the rhythmical power with these ganglia, since, where the ganglia exist, the rhythmical

action is the rule, whereas, in their absence, no real rhythm occurs when the part which does not contain them is separated from the rest of the heart; and this theory is the one which, with more or less modification, has been held. Observing the rhythm of the heart to begin at the sinus, it is supposed that the ganglia in the sinus were the originators of the rhythm, the ganglia in the interauricular septum and in the auriculo-ventricular grooves taking it on in turns, in subordination to its starting-point, or modifying it in some way. The main interest, then, of these experiments centres upon the relations between the ganglia and the muscle. The beat is evidently automatic, as it will occur in the heart removed from the body, and is not called forth by the stimulus of the blood or similar fluid within the heart-chambers, that is, by simple reflex action, as was formerly taught, since the beat will go on in the absence of such fluid.

As a subordinate question to the relations between the ganglia and the auricle, comes the question of the relations between the sinus rhythm and that of the rest of the heart. As regards this latter question, it may be said that, as the parts as the heart can beat rhythmically without the sinus, it is unlikely the sinus produces the rhythm.

But it is as regards the other question, as to whether the rhythm is due to nerve-influence either partially or entirely, that the difficulty arises; and if due to the action of the ganglia, whether this action be intermittent or constant. Is it motorial or otherwise? The experiments of Eckhard, Foster, and others, which showed that the application of a constant stimulus, electrical or otherwise, will produce a rhythm of contraction in an isolated apex void of ganglion-cells, make it probable that, if the movement be due to nerve-influence, this is constantly in action, but is converted into rhythmical action by the muscle itself, and would give to the heart muscle a property somewhat similar to that which was called long ago "rhythmical nutrition" by Paget. But Gaskell, in his exhaustive series of experiments, goes further, and supports a myogenic origin of the heart-rhythm. His experiments upon the frog have been controlled and contrasted with similar experiments upon the heart of the tortoise and other animals. He has shown that a strip taken from the very apex of the heart, and kept moist in a chamber, will, if subjected to a stimulus of induction-shocks sent in at regular intervals, after a time take on a spontaneous rhythm, which cannot but

be myogenic, as no ganglia exist in the strip; and we could scarcely believe it possible that the movement is due to the presence of nerve-fibres only, for they cannot originate movement. He has further demonstrated that the apparent difference between the action of the sinus, of the auricles, of the ventricles, and of parts of the latter, is one of degree, not of kind. If the one be myogenic, so too, in all probability, is the other, as it is unlikely that the several parts of the heart beat rhythmically according to different systems. The ventricle of the tortoise, if removed from the auricles, remains for a time quiescent, then commences to beat slowly, then more quickly, until it attains its maximum. So, too, for the strip from the ventricle; it remains quiet for a longer time; and then, under stimuli (or without?), will commence to beat, and will go on faster and faster until it reaches a maximum. The same observations are true of the action of the auricles, and of a strip from either auricle; and also of the sinus; the only difference being that there is a gradual lengthening of the period, during which the heart is as it were developing its rhythm in a quiescent state, from the sinus to the ventricular apex. We shall return to the bearing of this theory on the nerve-apparatus of the heart, and to other problems of the cardiac beat, on another occasion.—*British Medical Journal*.

LOCOMOTOR ATAXIA AND SYPHILIS.

At a stated meeting of the Academy held March 20th, Dr. Leonard Weber read a paper on the above subject. He commenced by saying that although the pathologist had not succeeded in establishing such a condition as syphilitic sclerosis of the posterior columns of the spinal cord, there had been collected a certain amount of clinical evidence that went to show an apparent connection between syphilis and locomotor ataxia. In a resumé of a history of the subject he spoke particularly of the publication of Fournier in 1876, which was mainly based on statistical data, and which recognized three forms of tabes: (1) the lumbar, which was exclusively spinal, (2) the cephalic, in which the cranial nerves as well as the cord were affected, and (3) the ophthalmic or amaurotic. After alluding to the

opinions and researches of other authors, he quoted the remarkable paper of Erb, published in 1879, in which out of 100 cases of tabes reported it was claimed that no less than 61 occurred in syphilitics. When Erb presented his views at the International Medical Congress in London, in 1881, however, they were not received with much favor, and among those Dr. Weber mentioned as distinctly opposed to them were Moxon, Lancereau, Westphall, and Rosenthal. But still more recently Erb has published a second series of 100 cases in which no less than 91 per cent. were syphilitic, while in 1,200 patients over the age of twenty-five suffering from nervous affections other than ataxia only 22½ showed a syphilitic history. His conclusion was, therefore, that tabetic patients were very frequently syphilitic, and it was altogether probable that tabes was a syphilitic disease. His opponents claimed, on the other hand, that there was no ætiological connection between the two affections, and that the prognosis was no better in those tabetics who had had syphilis than in those in whose cases there was no such history. After giving statistics from various writers Dr. Weber then referred to the paper of Dr. R. W. Birdsall, of New York, read at the meeting of the American Neurological Association in June, 1883, in which he reported a series of 12 cases of locomotor ataxia with a percentage of only 9½ of syphilitics. In comparing the statistics of different observers he continued, one could not but be struck by the very great discrepancy that existed in regard to the frequency with which tabes and syphilis were associated; but it was reasonable to suppose that it was not until quite recently that systematic attention had been given to the matter.

Having spoken of masturbation as a special predisposing cause of ataxia, he said that in all the cases of tabes that occurred in his practice he endeavored to exclude syphilis as a cause, as far as possible, by placing the patient for a time on specific treatment, and as the result of his experience it seemed to him that in certain instances there appeared to be some connection between syphilis and tabes, although it was not such a direct source of origin as rheumatic trouble. From a clinical stand-point there was a great difference between the symptoms in different cases, and great difficulty in ascertaining whether the diseased area was confined to the posterior columns or extended to neighboring parts, such as the lateral columns and the anterior cornua. In syphilitic tabes he believed that other

parts were especially liable to be affected. The pathological and clinical manifestations of tabes were protean in character, and it was in the atypical cases that syphilis was most frequently found associated with or antecedent to it. As for the symptoms in general they were the same, as a rule, in syphilitic and non-syphilitic cases. In regard to the prognosis, this was relatively favorable when the syphilitic trouble was not of long duration, and when the symptoms were of irregular character, and yielded to specific treatment.

It was a fact worthy of note that the results of anti-syphilitic had by no means fulfilled the anticipations formed by those disposed to accept the proposition that tabes was a syphilitic disease. The special treatment that Dr. Weber advised was a thorough course of inunction with mercurial ointment, as well as the use of iodide of potassium and baths. In all his cases of syphilis he had been more successful during the past ten years than during the ten years preceding, and he attributed this to the fact that ten years ago he had given up the internal administration of mercury, as a rule, and substituted inunction for it. While there might be occasional exceptional instances in which inunction would not be well borne, or could not be successfully carried out, he believed that all who would adopt this form of treatment would secure quicker, better, and more permanent cures than in any other way. In case of sudden and threatening outbreaks in old syphilitic patients there was nothing so immediately effective as large doses of iodide of potassium.

Out of 134 cases of syphilis in his practice the central nervous system was affected in 18, or $13\frac{1}{2}$ per cent. In eight of the 18 the trouble was located exclusively in the brain, two of the patients being females and the other six males. In five (all men) it affected the brain and spinal cord both, and in five (one woman and four men) it was confined to the cord alone. Two of the first eight patients had died of cerebral syphilis. The other six were still alive, but not cured. Of the five in whom both the brain and cord were diseased, two had died and five were living, and of the last five one (the woman) had died of syphilitic hemiplegia. Dr. Weber then gave a brief outline of seventeen cases of locomotor ataxia which he had met with in his practice. Three of the seventeen patients had had syphilis but in one case the syphilis was not contracted until several years after tabes commenced. In the two other cases it seemed to constitute an important ætiological factor. His conclusions were:—

1. That there was not sufficient evidence to show that syphilis was a direct cause of locomotor ataxia.

2. That there was plenty of proof that syphilis affected the cord, as well as the brain and meninges, and that it might be followed by tabes.

3. That such trouble occurred most frequently in those not efficiently treated.

4. That syphilitic lesions of the central nervous system were seldom, if ever, cured, and the necessity of early and long-continued treatment in all cases of syphilis, was, therefore apparent.

6. That the systematic use of inunction afforded the best means at our disposal for reducing the disease to early and harmless latency.

The discussion of the paper opened by the President, Dr. Barker, who related three cases of paralytic and ataxic trouble, in only one of which there was a distinct history of syphilis, but in all of which marked benefit was derived from antisymphilitic treatment, though they were not apparently cases of true locomotor ataxia; and he said that he mentioned them simply to illustrate the point that light in regard to pathology was not infrequently furnished by the effect of therapeutic measures.

Dr. Amidon said that he desired to put himself on record as very much opposed to calling typical ataxia a syphilitic disease. This supposed connection between the two affections was based on purely statistical data, but Dr. Birdsall's carefully recorded cases showed only 9.5 per cent. of syphilitic patients. The fact that the statistics of different authors, as given by Dr. Weber in his paper, varied to such a vast degree (the percentage of syphilitic cases ranging all the way from one to ninety-one per cent.) showed conclusively that statistical inferences were altogether worthless. In addition, the deduction that could be drawn from treatment showed that tabes was not a syphilitic disease. It might be true that a good many cases of apparent ataxia were relieved or cured by antisymphilitic treatment, but he was positive that not a single case of sclerosis of the posterior cord had ever been cured by such treatment. Dr. Amidon then spoke of the pathology of tertiary syphilis, illustrating the subject by a description of the localized and clearly defined cicatricial lesions resulting from the retrograde metamorphosis in gummatous deposits in the liver, and said that the characteristic lesions affecting uniformly the whole tract of the posterior columns of the cord, were

of an entirely different character. In conclusion, he said that the history of the entire course of the disease was against its syphilitic origin, for while its development was very slow and gradual the manifestations of tertiary syphilis appeared suddenly, and were characterized by great activity.

Dr. W. Taylor said that he had already placed himself on record as in accordance with the views just expressed, and he was very glad to perceive the cautious manner in which Dr. Weber had handled the subject. The possible syphilitic origin of tabes had been first hinted at by Duchenne, as he was naturally struck by the fact that in a considerable proportion of cases of ataxia coming under his care he found that the patient had had syphilis. Antisyphilitic treatment proved of no service in these cases, however, and he came to the conclusion that there was in reality no connection between the two diseases. Until Fournier's publication, therefore, the primary cause of ataxia was sought in sexual excess, alcoholism, gout, rheumatism, and exposure to cold; but when he reported that out of 30 cases no less than 24 were in syphilitic subjects, it began to be suspected that syphilis might be a very important factor in the causation of tabes. Having devoted some time to a consideration of Fournier's views, Dr. Taylor went on to say that in his last work that author had reported 94 syphilitic cases out of 103 tabetic patients. He also gave the statistics of a number of other writers (among them those of Rosenthal, one out of 65), and remarked that in these figures there was certainly sufficient disparity to throw doubt on any conclusions derived from them. In addition, he criticised the manner in which Erb and Fournier's cases were recorded, saying that it was painful to note the meagre and unsatisfactory data which they regarded as positive evidence of antecedent syphilis. As to the matter of pathology, he could only reiterate what he had said in the work in which he had acted as the collaborator of the late Professor Bumstead. Locomotor ataxia was known to be caused by sclerosis of the posterior columns, a lesion exactly limited to this portion of the cord, though often involving it to a considerable extent. The lesions of syphilis, on the contrary, were patchy and less diffused, and, moreover, always originated in investing structures, subsequently involving the cord itself. The same was true of cerebral syphilis, in which the lesions began in the meninges or bones and afterwards induced softening or induration of the brain.

It was true that ataxic symptoms sometimes arose in the course of tertiary syphilis; but a careful study of the case would show that the trouble differed in many respects from true progressive locomotor ataxia.

Dr. Birdsall having stated that he fully concurred in the conclusions of Dr. Weber in regard to locomotor ataxia and syphilis, said that the most of the cases which he had reported in his paper had been under his own personal observation. Out of 42 cases four were syphilitic, a percentage of 9.5, and he was surprised that this result differed so greatly from the statistics reported by Erb and some others. He then repeated the statistics given by various authors, and said that up to the present time, not including Erb's last hundred cases, there had been collected 525 cases, with an average of forty-three per cent. in syphilitics. This number, he thought, however, was entirely too small to base any definite conclusions upon. While, therefore, it would not do to ignore statistics altogether, any deductions derived from them in the present state of the question ought to be received with caution. In regard to Erb's remarkable figures, it might be explained that many of his so-called syphilitic cases would not be accepted as such by dualists, from the fact that he made no distinction whatever between chancre and chancroid, regarding the existence of either as conclusive evidence of syphilis; but if it was really found that there was a syphilitic history oftener in cases of ataxia than in other affections of the nervous system, the idea of a certain connection between the two diseases ought not to be rejected entirely. At the same time he was free to confess that up to the present no convincing proof of the existence of any such connection had as yet been presented. But while the lesions of syphilis in the nervous system were pretty well understood and generally recognized as distinctly different from those occurring in typical locomotor ataxia, the time might perhaps arrive when we should have to recognize syphilis, like sexual excesses, as one of the predisposing causes of ataxia.

Dr. E. L. Keyes thought that on account of the weight of authority supporting the figures the statistical element of the question could not be altogether disregarded. Personally, he did not believe that pure sclerosis of the posterior columns was caused directly by syphilis, but he could not see why it should be excluded altogether as a possible ætiological factor in tabetic trouble. Dr.

Keyes had had one or two instances in his practice where ataxic symptoms had been distinctly relieved by antisyphilitic treatment. He used mercurial inunction and the iodide of potassium; commencing with the iodide, and pushing it to the limit of tolerance. In addition, baths were employed, in accordance with the Hot Springs method. While none of his cases had been cured, the benefit received had sometimes been so marked that he was fully convinced of the efficacy of specific treatment in certain cases with ataxic symptoms.

Dr. A. McLean Hamilton thought that the whole trouble in regard to the matter lay in the fact that two distinct forms of disease had been more or less confounded with each other, namely, classic sclerosis of the posterior columns of the cord and cerebro-spinal syphilis. In regard to the former he had found that not more than twelve per cent. of the subjects of it had a much larger percentage of syphilitics; and in these he had seen marked benefit derived from the use of iodide of potassium, given in the most heroic doses.

Dr. F. N. Otis said that it seemed to him that we could hardly afford to disregard the experience of such distinguished investigators as Erb and Fournier, however much we might ordinarily be disposed to distrust statistics. In their respective fields these men occupied the most exalted position, and their opportunities for observation and research had been unsurpassed in extent. Although his own personal experience on the subject was small, Dr. Otis said, his knowledge of syphilis in general led him to believe that the disease in question might, perhaps, be of syphilitic origin. As a disease of the connective tissue it acted apparently in the same way as syphilis when located in the testicle or liver, for instance. Having explained the pathological process in syphilis at some length he went on to say that the lines of cicatrization, which were characteristic of the late stages of diseases, were believed by the best authorities to follow closely the lymph distribution of the part or organ affected. When these cicatricial tissues were once formed there was very little hope left of accomplishing anything by way of treatment. He quoted from Erb to show that very little was yet known of the true character of the pathological process in locomotor ataxia, and stated that that recognized as taking place in syphilis would satisfactorily explain all the phenomena observed if it could be proved that the cord was supplied with lymphatic vessels. It was only a short time since

the presence of these vessels had been demonstrated in the bones, and it was not improbable that ere long they would be shown to exist here also. The impossibility of removing cicatricial material by any therapeutic measures that had yet been discovered would also account satisfactorily for the fact that ataxia was not, as a rule, benefited by antisyphilitic treatment. That relief was afforded in a certain proportion of cases by specific treatment, however, was shown by some instances which had occurred in his own practice. In three cases of ataxia marked benefit had been derived from it, and in two of these he had found by the relief which had followed the division of a contracted meatus that all the urinary trouble experienced was not due to the tabes alone. In all ataxic cases, therefore, he thought it best to give the patient the benefit of the doubt, and institute a thorough course of antisyphilitic treatment before giving up the case as altogether hopeless.

Dr. E. C. Spitzka said that he thought the question had been looked at from too narrow a point of view, since an important set of facts had been ignored. In secondary syphilis the cerebro-spinal axis was sometimes affected, and it had been shown that in certain instances there was complete abolition of tendon reflex. Why, then, might not this also take place in tertiary syphilis? In his own cases two-thirds of the patients had had syphilis, though in none of the only four cases occurring in females which he had had was there any such history. After referring to paralytic dementia as a disease, which, like locomotor ataxia, frequently occurred in syphilitics, he said, in conclusion, that ataxia was not strictly a systemic disease, since other portions of the cord besides the posterior columns were not infrequently affected.—*Boston Medical and Surgical Journal*.

THE CONTAGIOUS NATURE OF CHOLERA.

It is admitted on all hands that, in India itself, cholera requires to be studied from two points of view, since it is necessary to have regard to the conditions which determine its endemic prevalence in a limited area of the country, as well as to those which determine its occasional spread over areas of great but varying extent. "To learn

the conditions of that endemicity and its variations is a problem," says Mr. Simon, "of the highest science." With regard, however, to the mode in which cholera travels from country to country, the opinion almost universally held and taught in England has been that cholera is a filth-disease, and that conditions of filth, especially filthy conditions of water-supply, "are the main facilitating conditions for the dissemination of cholera in Europe;" so much would probably be accepted by these who reject the next tenet in the English faith, namely, that cholera is due to a specific contagion. Mr. Simon summarises the conclusions of Mr. Netten Radcliffe's careful study of the European epidemics in these: "So far as the extension of the disease could be followed in detail, it was found to have had definite relation to personal traffic; in various important cases, the arrival of persons affected with the disease was unquestionably the starting point of local and, perhaps, national epidemics, and no extension of the disease was to be found, where the arrival of human beings from previously infected places was not either proven or probable." Further, it is observed, that the disease appeared to possess "great, though peculiar, power of spreading from the sick to the healthy," and that "human contagion is the one active power in the international spread of cholera."

If now we turn to Indian authorities, we find Dr. Bryden writing as the result of his life-long study of the subject these words, in communities which we can observe, and in which there is every opportunity of knowing the actual facts, there is little, if any, tendency of the disease which we call cholera, and which we assert primarily to show the effects on the system of an air-borne miasm, to spread from one man to another by mere contact." This conflict of opinion, however, is not so great as might at first-sight appear.

Dr. Bryden believed that there was a cholera-germ generated in certain districts of Bengal, which from time to time was carried out of these districts by moist air into countries where it had no permanent abiding place, but died out after a varying time. He regarded the spread of cholera over any area as due not to human intercourse, but to meteorological influences, and he believed that, speaking broadly, the disease could not be carried by human agency beyond the limits of the area naturally occupied by the invasion of the cholera-germ. Nevertheless, he admitted that cholera could be transmitted from persons who had been subject to the choleraic

influence, or by fomites impregnated with the virus. Mr. Macnamara, as will be seen, goes further than this, and expresses his belief, which he is able to support by evidence, that the only way in which the disease can be spread is by the contamination of water or food by the excreta of cholera-patients; that is to say, he is in entire accord with Mr. Simon, and the many able observers who have worked with him in preparing the reports presented to the Local Government Board.

It will probably be admitted that the difficulty of explaining all the phenomena of the spread of cholera on the water-borne theory very great; perhaps not insuperable, but as yet unsurmounted. Cholera is, indeed, strangely like influenza in its epidemic character; but, at the same time, has certain close resemblances to malarious fevers. Malarious fevers are, doubtless, intimately related with the water-supply, yet they are not, in any ordinary sense of the phrase, water-borne. Further, malarious fevers are said to be due to the morbid action of a bacillus, yet it is not contended that they are contagious or communicable, at least, in any ordinary sense attaching to these words.

To hope that the research now being conducted by the German Cholera Commission will afford a complete solution of all the difficulties which surround the question of the mode of propagation of the disease is, we fear, to take too sanguine a view of the possibilities of the inquiry. To prove that cholera can be produced by the inoculation of the cholera-germ would really only amount to establishing the truth of a proposition already arrived at by Dr. Bryden by a different chain of reasoning.

Whether we are prepared to accept or reject the germ-theory as applied to cholera, it must be admitted that quarantine-regulations must fail to defend a commercial country from the occurrence of epidemics; and they must fail because, in a disease like cholera, they must be inoperative and incomplete. Theoretically, if it be accepted that cholera is a transmissible disease, quarantine would be a rational measure if it could be applied with scientific precision to a country capable of complete isolation, where the paralysis of commerce could be viewed with equanimity; but, to quote again the words of Mr. Simon, "practically speaking, where great commercial countries are concerned, it can scarcely be dreamt that quarantine restrictions will be anything better than elaborate illustrations of leakiness." In-

spection of the passengers and crews of ships arriving from infected countries, and the isolation of persons manifestly affected with the disease, is a precaution which common prudence dictates, and which unquestionably ought not to be neglected, but an elaborate system of quarantine, since it cannot be made so perfect as to exclude the probability of the importation of the disease, must be useless; to those who do not admit that cholera is transmissible, all arguments on the question of quarantine must seem redundant. Quarantine having failed to accomplish the purpose for which it was elaborated, becomes an intolerable nuisance, and, in the fancied security which it affords, a real and fresh source of danger. It has been well said that where, in Europe, typhoid fever is endemic, there cholera may become epidemic. We have learnt that the only means to rid ourselves of the one is by attention to sanitary improvements; may no hideous epidemic of the other be required to convince the public of this truth!—*British Medical Journal*.

YELLOW PIGMENT FOUND IN THE INTESTINES IN CASES OF ARSENICAL POISONING.

The yellow pigment seen in the intestines of persons poisoned by arsenic is generally believed to be due to the transformation of white arsenic into the yellow sulphide. In Taylor on Poisons is found the statement that "White arsenic slowly becomes changed to yellow sulphide by the evolution of sulphuretted hydrogen in the decomposition of the stomach and its contents. It then forms a deep yellow stain through the coats and appears on the external surface. Messrs. J. Campbell Brown and Edward Davis report in the *British Medical Journal*, March 15, the examination of three bodies known to contain arsenic, with a view to determining the nature of the yellow stains. They collected a considerable quantity of yellow pigment, weighing in the moist state between 20 and 30 grains. It was carefully tested for arsenic but was found to contain none.

The yellow pigment was readily soluble in chloroform, forming a bright and clear yellow solution; less soluble in alcohol; slightly soluble in strong ammonia, reprecipitated by hydrochloric acid; and

insoluble in water. The chloroform solution left on evaporation a deep yellow residue. The yellow residue was reddened by strong hydrochloric acid, while nascent hydrogen from zinc and hydrochloric acid discharged the color and dissolved the residue. Nitric acid converted it into a purple, then red, then brown substance. Sulphuric acid gave a temporary violet color, quickly becoming brown. Sulphuric acid and pure sugar gave the violet purple tint characteristic of Pettenkofer's test.

MARTIN LUTHER AND HIS STONE.

By J. C. PETERS, M.D.

Martin Luther was born just 400 years ago, viz., in 1483. The practice of medicine was in the hands of the priests, and all were educated in the convents. Great events soon transpired; America was discovered, and the revolt of lay doctors under the lead of Paracelsus and Van Nelmont was taking place. Luther hated the priest doctors, but endeavored to follow their prescriptions as well as his rough, hardy, good sense and rebellious temperament allowed him. In 1519 he was so *lean* from study and anxiety that his bones could be counted, but he stood firmly upon his feet and his eyes flashed like a lion's. In 1530, while preaching a sermon, he became suddenly and dangerously ill. His health had been bad for some time, for he was subject to violent headaches and attacks of giddiness. But now he was prostrated by an attack of stone so severe that all thought he was dying. He had not only finished his translation of the Bible, but it was printed. He conceived that his work was done, and his life had long ceased to have much interest for him. He felt so weary that he had no will to protract his days in such a cowardly and "accursed" world. The expected *life* burned at the *stakes* of course was willingly to die a natural death. He said, if I die in my bed it will be a grievous shame to the Pope. For 200 years the world has hated no one as it hates me. I, in turn, have no love for the world; I am tired of it. God come soon and take me away. Such remedies as were then known for stone were tried; mechanical contrivances were used to shake down the stone;

they made me drink water, says Luther, "as if I was a great ox," to wash down the stone; they would not allow him any beer or wine and he prepared to die. I depart, he cried, to his Maker, "a foe to thy foes and *banned* by thy enemies, may we *stand* at thy judgment bar in that great day." The Electors of Saxony and Melancthon were weeping at his bedside, but even in that supreme moment Luther could not resist his humor. "Have we not received good at the hands of the Lord and shall we not also receive evil. The Jews stoned Stephen; and my stone, the little villain, is stoning me."

Finally he became still more impatient, and insisted upon being carted home. He said, "I will get home and get in my coffin, and give the worms a poor doctor. But the movement of the cart shook him up so that the stone was dislodged. He then drank a goblet of wine and recovered.—*The Planet*.

TO GIVE QUININE TO CHILDREN.—Dr. F. E. Daniel, of Fort Worth, Texas, says he employs the following method of administering quinine as far as the taste goes: "Press the quinine powder into the smallest bulk; drop a half teaspoonful of the thick, tenacious part of the white of an egg; place the powder on it carefully, and cover it up with another drop, so as to envelop the powder entirely, without letting it come in contact with the sides or bottom of the spoon. If carefully done it can be most satisfactorily given.—*Texas Courier-Record of Medicine*.


PIPIZAHUIC ACID.—We are indebted to the *American Journal Pharmacy*, April, 1884, for a description from two contributors, of a valuable new substance, *pipitzahoic acid* or *vegetable gold*. It may be prepared from several species of the genus *Perezia*, a bilabiate composite plant, of the sub-order Labiatifloræ and the tribe Mutisiacæ. *Pipitzahoic acid* occurs in the root of the plant as a golden yellow substance, in stellate groups of acicular or dagger-shaped crystals. Its therapeutic virtues, if any, have not been determined, and at present it has the reputation of being a drastic in a dose of from four to eight grains.

EDITORIAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE MAY MEETING—THE NEW BOARD OF MEDICAL EXAMINERS—PROPOSED ACTION AS TO THE QUALIFICATIONS NECESSARY TO ADMIT A PERSON AS AN OFFICE STUDENT.

The weak point in legislation generally in this country, is in the multiplication of laws, and a failure to execute those already in existence. This state of things exists in our medical societies, as well as in the Legislatures. Many of our friends who take this view of the case may at first thought be disinclined to add more to our rules, until there is better evidence that the old ones are being obeyed.

We believe that in essential particulars there has been a very active obedience to the rules of our society, and more particularly in respect to the law establishing the Board of Medical Examiners, and all the salutary legislation which has grown out of it, and it is in this direction, i. e., in the direction of medical legislation that we still need some regulations, to give symmetry to work already auspiciously begun.

Nearly a quarter of a century has passed since our law of medical

examinations was passed. Since that day there has been a great change going on in the profession and out of it, on the subject of medical education. North Carolina was almost alone for the period mentioned, in the stand her medical men took. During that time public attention has been drawn to the great outrages which have been perpetrated on the people by the disgraceful manner in which diplomas have been granted, to uneducated persons.

These flagrant wrongs have had the good effect of convincing the law-makers that some remedy must be adopted. Several gratifying instances of wise legislation, notably in the case of Alabama, West Virginia, and more recently Virginia, show how deeply the influence of our good example has been felt. It is very encouraging to us as pioneers. Still we must not rest satisfied with our present law, as good as it is. As we have pointed out many times before, it should be amended so as to make it a misdemeanor, punishable with a fine, to practice without the license of the Board of Examiners. The term of service of the Board should be so arranged that there should remain at each reorganization, two of the old Board, that no serious alteration of policy should break its successful working. With these amendments much more effective service could be rendered. We make these suggestions, because there is to be an election of a new Board at the next meeting, and all such points should be duly considered.

Indeed the most important action of the Society at the approaching meeting will be the selection of the seven Examiners for the ensuing term. How much depends upon these gentlemen being wisely chosen, is well-known to those who have seriously observed the development of our Society. We trust that each member will give this subject some thought in advance of the meeting, and that only such members shall be nominated, as have the requisite educational attainment, and what is equally important, only such as are known to have true dignity of character and the moral courage to do their duty.

It is no easy or pleasant matter to serve as an Examiner. It requires that one must give up, to a great extent, participation in the meeting of the Society, and to the social enjoyments of such occasions, and spend from eight to twelve hours a day in patient work. That gentlemen with all the necessary qualifications can be found, we all know to be true, and all that is necessary is to consider the subject with that seriousness it deserves.

We would like to mention one other subject connected with medical education, as it will be placed before the meeting for its action. It is that the Society may come to some agreement as to the qualifications to be required of a student before admitting him to our offices as a student of medicine. Ohio has recently taken action in this matter, and Alabama has a law on the subject, by the terms of which, these preliminary examinations are made auxiliary to the work of the Board of Examiners.

It is not a new idea to commence medical reform at the very threshold of the entrance to the profession. It has been discussed in the American Medical Association, and is about to take proper shape all over the country. It is desirable, if it were possible, to return to the old plan of the *quasi* apprenticeship of old, that students could be drilled in all the departments of medical study, is the "doctor's shop," teaching them even the homely lesson of recognizing a good piece of rhubarb when they saw it. At any rate, great good can be done by the uniform practice of satisfying ourselves about the moral and educational fitness of young men applying to become students. Now that the tendency is to a higher grade of scholarship, let us apply those means we have so long proven, to ensure a steady and sustained effort in this direction.



TOOTHACHE.

To the Editor of the North Carolina Medical Journal:

A great many remedies have been recommended for this common and very painful affection. One of the best and most pleasant things that can be used to relieve this painful state of the dental nerves, is chewing cinnamon bark. It destroys the sensibility of the nerves and suspends the pain immediately, if the bark is of good quality. After repeated trials, and in different cases, I am convinced that it is generally as efficacious as any of the other remedies, suggested for odontalgia, and not attended with the unpleasant consequences of creasote, carbolic acid, &c., which relieve the pain, but leave the mouth as sore and painful, as the tooth was previously, though these results are usually due to carelessness in using.

Alexandriana, N. C.

J. R. IRWIN, M.D.

PROFESSIONAL SELF-OSTRACISM.

We give below a copy of a poster which a correspondent informs us was "posted all over the county (Duplin) at every fork and cross-road on trees, and at every conspicuous place." The poster is surmounted with a 7x8 portrait having the name "Dr. H. O. Hyatt" printed beneath it :

"DR. HYATT will be in Kenansville, Thursday, April 17, to remain until Sunday. He will come equipped with the finest and best selection of Surgical and Scientific Instruments in the State, and prepared to treat all varieties of Chronic or lingering Diseases. Those wishing to consult him should come early and have themselves thoroughly examined. Ladies will be attended to in the morning and Gentlemen in the afternoon. Those requiring medicine will have it sent to them from his office in Kinston."

Dr. Hyatt resigned from the Medical Society of North Carolina a few years ago, and therefore is no longer amenable to the laws of that body; but we submit that his departure from the precepts of the Code of Ethics should lead the Board of Medical Examiners to inquire whether or not he can now justly hold the license of that body.

MEDICAL ANNALS.—We are indebted to Dr. Quinan for the correction of a misstatement which we quoted from the *British Medical Journal*, and which appeared in the March JOURNAL, in reference to the priority of discovery of subcutaneous medication. It was attributed by that Journal to Dr. Alexander Wood, of Edinburgh, but Quinan shows satisfactorily that Dr. Edward Warren, editor of the first series of the Medical Journal of North Carolina, used morphia hypodermically in 1851. We are glad to make this correction. The question of priority is always a delicate personal one, but estimated upon their true merits, it is really difficult to name a single discovery or invention which does have the appearance of being evolved, in a far truer sense than that in which it is customary in our day to employ the term.

REVIEWS AND BOOK NOTICES.

CONTAGION AND INFECTIOUS DISEASES, MEASURES FOR THEIR PREVENTION AND ARRESTS. Small-Pox (Variola), Modified Small-Pox, (Varioloid); Chicken-Pox (Varicella); Cow-Pox (Variolæ Vaccinæ); Vaccination; Spurious Vaccination. Illustrated by Eight Colored Plates. Circular No. 2. Prepared by * * * JOSEPH JONES, M.D., etc., etc. Baton Rouge: Printed by Leon Jastremski, State Printer. 1884. Pp. 410.

While all medical knowledge may be said to have its foundation far back into the centuries, of no department of medical learning can be said with so much truth that its essential integrity depends upon the unbroken stream of transmitted knowledge, as in the case of vaccination. The very earliest essays on the subject were the very best. The cases brought forward to substantiate and elucidate the primary theory were not only graphic models, but possessed the inherent quality of honesty, serving then as now, for the guidance of writers in every department of medicine. Vaccination was a new fact and it was given to the world in an almost pure state, nearly divested of undemonstrable theory. Jenner's "*Inquiry*," stands to-day the most remarkable medical treatise of any time. A simple pamphlet—not deserving to be called a book—wrought out for the whole world and for all time, more good to the human race than any treatise uninspired.

We heartily agree, therefore, with Dr. Jones, that to impart a thorough knowledge of the importance of vaccination to public officers entrusted with its practice, no way so thorough, and none so calculated to inspire a proper conception of the subject could be devised, as to place before them the original teachings of the master and his contemporaries.

Thanks to Dr. Jones, we have here, collected in one volume, medical contributions of such rarity, that but few of the best medical libraries in this country can boast of their possession.

The arrangement of the collection is admirable, and serves to give a historical and logical idea of the whole subject. Jenner's "*Inquiry*"; Woodville's "*Reports of Inoculations for the Variolæ Vaccinæ*"; "*Report of the Royal College of Physicians, London, on Vaccination*"; Monro, "*On Small-Pox and Vaccination*"; "*History of*

Small-Pox Inoculation”; papers on the introduction of Vaccination into the United States; *The Natural History of Cow-Pox* by Ceely with some of the colored illustrations from Vol. 8 of the Transactions of the Provincial Medical and Surgical Association; “*Researches on Spurious Vaccination in the Confederate Army*” by Dr. Jos. Jones, many of the papers on Vaccine-Syphilitic Inoculation, especially detailing the series of these inoculations at Rivalta, Lupara, Bergame, and Auray, and the series recorded by Mr. Jonathan Hutchinson.

It would be a mistake, though, to conclude that this volume is a mere compilation. Dr. Jones with rare skill has brought great personal knowledge of the history and practice of vaccination, to elucidate, and weave all of his selected papers into a continuous whole. He has done a work which very few men in this country could have performed, and about which too few medical men have any desire to become acquainted. He has rescued from obscurity, and in one or two instances, from destruction, two or three masterpieces of scientific description, and has placed his own “*Researches on Spurious Vaccination*” now become rare, before a medical public better prepared to appreciate it than when it was first issued.

His adverse comments upon the attempts at the revival of *Lactovariolous Inoculation*, by Dr. Tebault, are particularly appropriate in this place, as it is to be remembered that the volume was written for the guidance of quarantine officers.

There is no need to say anything of Dr. Jones’ book in the way of critical analysis, though upon several points of importance we do not agree with him. Suffice it to say that he has done the profession incalculable service in giving in the compass of one volume an almost complete library on vaccination.

MEDICAL ANNALS OF BALTIMORE FROM 1608 to 1880, INCLUDING EVENTS, MEN AND LITERATURE, To which is Added a Subject Index and Record of Public Services. By JOHN R. QUINAN, M.D.

In this volume we have a suggestive model for work to be done for other cities, in recording the history of the lives and scientific acquirements of their medical men. Dr. Quinan has let few items relating to his widely scattered subject escape him. What patient industry, what keen insight, what knack in delving amongst the rubbish of old books, what a genuine love of books and admiration

for one's fellows have guided the labors which brought forth this little volume, a few of the author's friends will appreciate.

We have gone through it page by page and have found a great deal to interest and instruct, but most of all we have admired the unselfishness of the author. Here and there we come across the familiar name and record of an old army senior, and read with pride the simple catalogue of his achievements.

Baltimore may well be proud of her Medical Faculty, and thankful too to Dr. Quinan for the kindly impulse which led him to impose upon himself such a task.

We are pleased to see that the Committee on Publication of the Medical and Chirurgical Faculty of Maryland have done the author the graceful compliment of inserting his portrait as a frontispiece.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE HEART. By CONSTANTINE PAUL, Member of the Academy of Medicine; Physician to Lariboisière Hospital. Translated from the French. New York: Wm. Wood & Company, LaFayette Place. 1884. Pp. 355.

Will treatises on the heart never cease to issue? Probably not until some one succeeds in writing a book clearly and concisely, and divested of personal theories. Each author in turn seeks to simplify the subject, but how few have succeeded in meeting the approval of the profession is evidenced by the multiplication of monographs.

The first section of this volume is devoted to a general consideration of the topography of the heart. The author says that for the last ten years he has adopted the example of Sénac in describing the heart as shaped like a triangular pyramid. "Regarded as a pyramid it presents three surfaces. An anterior vertical surface corresponding to posterior wall of the sternum and the costal cartilages; this surface is triangular. The apex of the triangle is formed by the tip of the left ventricle—the apex of the heart. The base is formed by the vertical border of the right auricle, which is elongated vertically like a spindle, receiving directly the superior and inferior venæ cavæ." * * * "The inferior border of the triangle passes from the apex of the heart to the insertion of the inferior vena cava. This border is very irregular, and is marked particularly by a fatty band. The left border is oblique; it starts from the insertion of the supe-

rior vena cava, passes in front of the aorta and the origin of the pulmonary artery and follows very accurately the anterior border of the interventricular notch; it corresponds to the groove followed by the cardiac vessels and nerves, except at the apex, at which the left ventricle makes a slight projection.

The inferior surface of the heart is flat, approximately horizontal, slightly inclined from right to left and from behind forward. It rests upon the diaphragm and is formed by the base of the right auricle and the inferior surface of both ventricles. The interventricular groove divides this surface into two equal parts.

The left surface of the cardiac pyramid is convex; it is formed by the pulmonary surface of the left ventricle and is slightly smaller than the two others. It is oblique from right to left, from above downward, and from behind forward.

The base of the cardiac pyramid is formed by the two auricles. The right auricle forms the base of the anterior surface; it has the shape of a vertical spindle, a sort of enlargement of the *venæ cavæ*." With this description, which we have somewhat abridged, the author believes that the examination of the heart becomes much more easy.

The place which sphygmography is given as a diagnostic means, is considerably modified by accumulated experience. In the earlier days of sphygmography it was believed that each diseased orifice would give a, so to speak, specific appearance to the pulse, that we would be able to recognize at first sight an aortic, a mitral pulse, etc. Experience has shown that the matter is not so simple as it seems.

This volume is the March number of Wood's Library and will be widely read by the numerous subscribers, but more especially prized as a book of reference.

ON THE PATHOLOGY AND TREATMENT OF GONORRHOEA. By J. L. MILTON, Senior Surgeon to St. John's Hospital for Diseases of the Skin. Twelfth Edition. New York: William Wood & Company, 56 and 58 LaFayette Place.

From the author's preface we learn that the present volume contains in an abridged form, the substance of earlier editions. In order to reduce the size of the volume many of the cases in the earlier edition have been omitted, only enough being retained as examples absolutely necessary to show the power of certain remedies, or

because they illustrate peculiar forms of disorder which have been rather overlooked.

Mr. Milton's book is better known on this side of the Atlantic by the numerous quotations made from it by other authors. It is a standard work, recognized by the best writers on venereal as abounding in sound teaching.

This edition of Mr. Milton's work was revised since Dr. Otis gave to the profession his views of the cause of gleet, and he remarks in commenting upon it, "stricture is by no means always at the bottom of recurrent gleet as has been alleged. Finally, I may observe that gleet is sometimes cured without the complicating stricture being removed."

Just the matter of reviewing the enormous mass of writing which accumulates upon the subject of the treatment of gonorrhœa alone, requires peculiar diligence; but to go over the history of these remedies and select the grains of truth from the chaff, requires a judicial mind and a large experience. This task our author has done best of all, and if any of the contributors to the "medical briefs" should chance to find the time to read carefully what is here so well discussed, he would be a silly fellow, indeed, if he ever again committed the folly of communicating another "sure cure" to print.

THE TONER COLLECTION. From the Annual Report of the Librarian of Congress, we get the following interesting item :

During the year, the Librarian has completed the arrangement of the books constituting the Toner collection, presented to the Government by Joseph M. Toner, M.D., and accepted by act of May 19, 1882. The books have all been stamped and labeled, and the catalogue work is in progress. There have been added to this collection during the year 1883, by the donor, four hundred and seventy volumes of books and 3,755 pamphlets. To render its stores of books, manuscripts, and periodicals increasingly useful, better and more spacious quarters than its present location in a dark crypt of the Capitol are greatly needed. Among the accessions of the year may be named an extensive collection of authentic portraits of American physicians and surgeons, including many of early date, which have been fully indexed for ready reference. The frequent calls upon the Toner collection for information upon points of biography and history, as well as medical science, evince the utility of this addition to the stores of the Library of the Government.

CURRENT LITERATURE.

LINNÆUS'S "GOLDEN STATUE" FOR DR. PATRICK BROWNE, WHO FIRST INTRODUCED SPIGELIA TO THE MEDICAL PUBLIC.

In looking up some references in the Peabody Library I was considerably interested in finding in "The Civil and Natural History of Jamaica," London, 1756, by Dr. Patrick Browne, what is probably the first account of the anthelmintic properties of spigelia. This seems probable from a manuscript letter appended to the volume, and written to Dr. Browne by the celebrated naturalist Linnaeus. It is dated Upsal, 19 October, 1756, and contains the following: "What you have delivered concerning the spigelia against worms, is very wonderful, since the like never was met with in the medical art, *for which alone you ought to be honored with a golden statue.*"

"As it may be of interest to the many practitioners who to-day use this excellent remedy to know something of its history I append a portion of Dr. Browne's account. "The 'worm grass' grows naturally in most parts of South America, and now cultivated in many of the gardens of Jamaica. It has been long in use among the negroes and Indians, who were the first acquainted with its virtues, and takes its present denomination from its peculiar efficacy in destroying worms, which I can affirm, from a great number of successful experiments.

"It does this in so extraordinary a manner that no other simple can be of equal efficacy in any other disease as this is in those that proceed from these insects, especially when attended with fever and convulsions. The method of preparing this medicine is as follows, viz.: You take of the plant, roots, and all, either freshly gathered or dry, two moderate handfuls, and boil them over a gentle fire in two quarts of water, until one-half of the liquid is consumed, then strain off the remainder and add a little sugar and lemon-juice to give it a more agreeable taste and keep it from growing viscid or clammy. It may be, however, observed that the decoction is sometimes clarified and sweetened, and is then equally efficacious; which gives a hint to have it made into a syrup.

"The common method of administering this medicine is as follows, viz.: to a full grown person you give half a pint at the hour of

rest, and a proportionate quantity to all weaker or younger subjects, which is to be repeated once in twenty-four hours for two or three days after. But as the largeness of this dose may render his action too violent, and the use of it both unsafe and precarious, I would recommend the following method as less hazardous and as effectual. Give about four ounces to a grown person for the first dose, and about two or three every six hours after, if its anodyne quality will permit; but to persons of weaker constitution it should be repeated only ten or twelve hours. This is to be continued for the space of thirty-six or forty-eight hours, when the double dose may be again repeated, and after it takes its full effect it must be worked off with some gentle purgatives, such as the infusion of senna or rhubarb with manna, etc. This medicine procures sleep almost as certainly, and in equal degree with opium; but the eyes seem distended and appear bright and sparkling as they generally do before the eruption of the small-pox and measles, after the sleepy effects are over.

"In a short time after this first dose is administered the pulse grows regular and begins to rise, the fever cools, the convulsions, if any, abate. All the symptoms appear more favorable, and the worms are generally discharged in great quantities by the use of the subsequent purgatives, if not before,—often above a hundred at a time. But when a few only come away, and those alive, which is seldom, the dose must be again repeated, and this scarcely ever fails. I never knew this medicine ineffectual when there was the least probability of success; nay, I have often found it serviceable when there was not the least reason to expect it. I have often been, however cautious in ordering it for children, for, although I never knew it at all hurtful, its effects upon the eyes are such as frequently to deter me, especially as their fibres are weakly and more sensible of irritation, and the fevers arising from this source in such subjects, seldom so violent as to hinder the administration of some other medicine equally as effectual when the symptoms are not too urgent."

Dr. Browne certainly shows himself to have been a very close observer, and his hints as to the administration as a syrup of spigelia, followed by senna or rhubarb and manna, are carried out to this day,—over a hundred years since his announcement,—with very little improvement.—*Chas. S. Dolley, M. D., in Philadelphia Medical Times.*

IS SMOKING INJURIOUS TO HEALTH ?

Although the above important question is so frequently asked, more especially of medical men, yet their replies are as a general rule either of a vague or dogmatic nature that is anything but satisfactory. There has been unlimited discussion respecting the injurious effects of smoking, ever since the first introduction of tobacco, and a great deal of nonsense has unfortunately been urged by enthusiasts on both sides. Some have praised tobacco far beyond its merits; while others have so enlarged upon its injurious and poisonous qualities as to make one wonder that anybody who smokes should be left alive at all. Hitherto, however, no satisfactory solution of the problem appears to have been arrived at. Our object in this paper will be to deal as concisely as possible with the subject upon its merits.

In the first place, we may inform our readers that smoking is and is not injurious. This apparently contradictory assertion admits, however, of the following explanation. In New England, it has been with truth alleged that the thirst induced by smoking is an active incentive to alcoholic excess and its attendant evils. Now, on the other hand, amongst Asiatic nations the reverse holds good. Mr. Lane—translator of the *Arabian Nights*—when in the East, noticed that smoking appeared to possess a soothing effect, attended with slight exhilaration, and that it supplied the place of alcoholic beverages. Mr. Layard, whose knowledge of eastern nations is most extensive, was also of the same opinion. Mr. Crawford, again, an authority of high repute as regards Asiatic habits, believes the use of tobacco has contributed to the sobriety both of Asiatic and European nations. Here we have two entirely contradictory results, as, in North America smoking produces dissipation; whilst in the East it not only restrains, but takes its place. It is, therefore to climate, temperament, and bodily constitution acting and reacting upon each other, that we may trace so opposite an effect.

The chemical constituents of tobacco are three, the due consideration of which is highly important. They are: (1) A volatile oil; (2) a volatile alkali; (3) an empyreumatic oil. The volatile oil, although in minute quantities, has a most powerful action on the physical system, even in the smallest dose; and when taken internally, gives rise to nausea with giddiness. The volatile alkali is

nicotine, possessing narcotic and very poisonous qualities; so much so, indeed, that a single drop of it is sufficient to kill a dog. The proportion of this substance in the dry tobacco-leaf varies from two to eight per cent., according to Professor Johnston, who states that 'in smoking a quarter of an ounce of tobacco, two grains or more of one of the most subtle poisons known may be drawn into the smoker's mouth;' the reason why he is not poisoned being because this deadly juice is not concentrated. Empyreumatic oil (from Gr. *empyreuo*, I kindle), the third active ingredient of tobacco, is so called to express the burned smell and acrid taste which result from the combustion of the tobacco during smoking. This oil closely resembles in its action that which is produced from poisonous foxglove leaf (*Digitalis purpurea*). A drop of empyreumatic oil when applied to the tongue of a cat has produced convulsions and death in a few minutes. Reptiles are destroyed by it as through an electric shock. It must be borne in mind that these three chemical ingredients are *united* when smoking, and produce to a greater or less degree their respective effects. A cigar when smoked to the *end* effectually discharges into the smoker's mouth everything produced by its combustion. When saliva is retained in the mouth, the effects of tobacco in one sense become more markedly developed on the nervous system. On the other hand, when expectoration takes place, digestion becomes impaired, from the diminution of saliva, which plays an important part in this function. We have heard medical men, who were themselves smokers, aver that the former is the least of the two evils; which we hope is the case, as the habit of constant expectoration in which many smokers indulge, is certainly one of the most unpleasant concomitants of the pipe or cigar.

In a purely physiological sense, smoking acts as follows: (1) The heart's action becomes lowered; (2) the elimination of carbonic acid is diminished, thus interfering with the respiratory power; (3) the waste of the body is checked, and digestion to a certain extent impeded. Excessive smoking disorders digestion, and, where the heart is weak, often induces disease of that organ. It is by no means uncommon to find habitual smokers troubled with dyspepsia. Dr. Leared considers excessive smoking decidedly productive of indigestion. Dr. Pereira, who was a high authority on such matters, when alluding to habitual smokers in his celebrated *Materia Medica*, observes, 'The practice, when moderately indulged in,

provokes thirst, increases the secretion of saliva, and produces that remarkably soothing and tranquilizing effect upon the mind which has caused it to be so much admired and adopted by all classes of society, and by all nations civilized and barbarous.' Later, on, the same eminent authority states that, 'when indulged in to excess, and especially by those unaccustomed to its use, smoking causes nausea, trembling, and in some cases paralysis and death.' Instances are recorded of persons killing themselves by smoking seventeen or eighteen pipes at one sitting!

In his luminous *Treatise on Poisons*, Dr. Christison states that 'no well-ascertained ill-effects have been shown to result from the habitual practice of smoking,' On the other hand, Dr. Prout, a late distinguished physician and chemist, was of a different opinion. He observes: 'Tobacco disorders the assimilating functions in general, but particularly, I believe, the assimilation of saccharine principle. It is the weak and those predisposed to disease who fall victims to its poisonous operation, whilst the strong and healthy suffer comparatively little therefrom.' So even this learned physician's opinion is to a certain extent thus modified.

The researches of Dr. Richardson, F.R.S., are of immense value with regard to the action of tobacco upon the health. He is of opinion that there are no grounds for believing that smoking—of course, we infer, when indulged in with moderation—can produce organic change. Functional disturbances of the heart, brain, and vision, he tells us, may be traced to its excessive use. It is universally, however, admitted that tobacco, like alcohol—in minute doses—arrests oxidation of living tissues, thus checking their disintegration. Dr. Richardson, for this reason, justly considers smoking highly injurious to the young, causing impairment of growth.

In the course of an important discussion which took place between Sir Ranald Martin, Mr. Solley, Dr. Ranking, and other scientific physicians, the following important results were arrived at respecting smoking: (1) That the habit is only prejudicial when carried to excess; (2) that tobacco is innocuous as compared with alcohol, and in no case worse than tea, and by the side of high living, contrasts most favorably. Whether smoking is or is not injurious to health depends principally upon the following conditions: (1) The kind of tobacco smoked; (2) the manner in which it is consumed; (3) the amount of tobacco smoked; and lastly when it is indulged in. The

great object is to obtain a tobacco which possesses the smallest percentage of nicotine. It was formerly believed that the best varieties of Havana and Turkish tobacco were the most innocuous. According, however, to the recent exhaustive researches of Dr. Geo. Harley, F.R.S., it appears that the more delicate the aroma of tobacco, the more poisonous it becomes. Dr. Harley is also of opinion that 'Caporal' tobacco contains *least nicotine*, and is consequently to be preferred by those desirous of health. Pipes made of clay, and meerschaums—not foul—are, Dr. Richardson considers, in a hygienic point of view, superior to cigars and cigarettes. Neither cigars nor cigarettes should never be smoked near the end, as the nicotine then is discharged into the mouth in larger proportions. M. Melsens, a very distinguished chemist, is of opinion that a plug of cotton-wool saturated with a solution of strong citric or tannic acid should be inserted in the stem of the pipe, cigar, or cigarette holder. By this precaution, the smoke is effectually filtered, ere reaching the mouth, as the nicotine would then be seized by and combined with the acid. Those who object to this plan on account of its trouble, might with advantage place a small piece of plain cotton wool, in the stem of their pipe as a filtering agent. This should on each occasion be removed and replaced by a fresh one. A more convenient, and probably not less effective plug, is a bit of paper crumpled into a soft ball and placed in the bottom of the pipe. It acts as an absorbent of the objectionable juices which might otherwise find their way into the mouth, and can be changed if the smoker chooses, every time he fills his pipe.

From a review of the scientific testimony and physiological bearing upon the subject, we may safely arrive at the following conclusions: (1) That smoking in excess is decidedly an injurious habit, frequently causing dyspepsia, and functional diseases of the heart, brain, and nervous system. (2) That smoking, even when in moderation, is pernicious in early life, also to certain constitutions, and in particular conditions of the body. (3) That in adult life and in ordinary health, no well-ascertained ill effects have been demonstrated as owing their causation to *moderate* smoking. (4) That the *moderate* use of tobacco is not only in many cases a harmless luxury, but occasionally, from its soothing and tranquilizing influence, a useful adjunct. Smoking, even in the strictest moderation, with some persons of peculiar idiosyncrasies, acts as a poison, and should

therefore be avoided, when feelings of discomfort are entailed by its use.

It is impossible to lay down any rule as to the amount of tobacco which may be consumed without a deleterious effect upon the health. What would be moderation to one is often excess to another, according to temperament, habit, and individual peculiarities. Each person ought to be able to judge for himself as to what is moderation. The best time for smoking is undoubtedly after a meal; and the most injurious, on an empty stomach.

In drawing this paper to a close, we cannot do better than by appending the following extract, taken from Mr. Dawson's valuable little work on longevity. On page sixty-nine of *How to Prolong Life*, when speaking of smoking, Mr. Dawson observes: 'All things taken into account, it is evident that tobacco in excess is certainly prejudicial to good health; in moderation, however, it may be indulged in with comparative impunity; but under any circumstances, it should be known that a man in health is much better without it. How much more so in the case of those who are weakly! Lastly, I desire to impress upon all smokers that *moderation* in this habit is of no small moment, the ill effects being proportioned to indulgence.'—*Chambers's Journal*.

VEGETABLE GUM BY INOCULATION.—A Dutch physician Dr. Beijernick has discovered that gum-bearing trees, such as the peach, apricot, plum, cherry, may be inoculated with gum from other diseased trees, and yield gum at the points of insertion. By microscopical examination he found that the causative element in the gum was due to the presence of a fungus belonging to the *Ascomycetes*, and that spores from this fungus alone would produce the gum disease, the name of the fungus is *Coryneum Beijerinckii*.

THE ANNUAL ESSAY.—Dr. J. L. Nicholson, of Richlands, Onslow County, annual essayist, has selected as his subject "ANIMAL HEAT; ITS SOURCES AND VARIATIONS." The essay will probably be read on the second day of the session of the State Medical Society.

APOMORPHIA IN INFANTILE CONVULSIONS.

Dr. Edward Cotterell, in the *Medical Press and Circular*, reports the following:

On November 11, 1883, I received a summons requesting my immediate presence to a child in a fit. Upon my arrival I found the patient, a child, aged eighteen months, suffering from typical infantile convulsions. The mother stated that the child was attacked about half an hour after its dinner, which upon inquiry I found consisted principally of greens and potatoes. The attack was preceded by vomiting. There was a great congestion of the veins of the neck, and the breathing was stertorous. I immediately proceeded to use artificial respiration by the Marshall Hall method, and after about five minutes the breathing became less stertorous, and the cyanosis less. I thought it would be a good plan to evacuate the contents of the stomach, in spite of the mother's assurance that the child had returned all its dinner, and, failing to produce reflex vomiting by irritation of the fauces, I procured some apomorphia. I administered two minims of a two-per-cent. solution of this drug subcutaneously, and in one hundred seconds the stomach evacuated its contents—a prodigious quantity—with hardly any effort.

Immediately after this the convulsions ceased, and the child became quite conscious, nor has it subsequently had any attacks of a like nature.

I am not aware of apomorphia having been used before in the treatment of infantile convulsions, and my experience of this treatment up to the present rests upon this single case, but the result was so gratifying that I am persuaded to publish it, being confident that in apomorphia we have a drug capable of controlling the fits when these are due to gastric irritation; and I am sure that a very large percentage of infantile convulsions—at any rate those occurring among the children of the poor—are due to injudicious feeding. Another recommendation in favor of the use of a hypodermic injection of apomorphia in this disease is the ease with which it can be administered.

THE ALLIGATOR BOY.—The last number of the *Journal of Cutaneous and Venereal Diseases* gives a lithographic picture of a case of *ichthyosis* in the person of a boy who has been exhibited as the alligator boy. Under the treatment of Dr. George H. Fox there was considerable improvement, cod-liver oil being applied externally, and iodide of iron internally.

BROKEN BREASTS.

No doubt great good has come from the recent spirited discussion of puerperal fever by the profession of New York, and every other city in the United States having a medical society. The old and the young have alike had a chance to compare their facts and theories, concerning a disease that has from the earliest time been the *bête noir* of the medical practitioner. This disease having been so thoroughly discussed, we would suggest that Drs. Thomas and Barker now agitate the subject of mastitis, and tell us when and how to anticipate or prevent the sufferings which nursing women endure. Perhaps these gentlemen, like many others, think this subject is too easy and simple to receive great attention. Any doctor ought to know enough to prevent or successfully manage a "gathered breast," to tell the nursing woman that she must keep the breast thoroughly emptied of milk and thereby prevent the engorgements of ducts and gland cells which precedes the development of inflammation, or to poultice and incise when abscess has formed. A great deal of suffering might be relieved if these great lights of the profession would tell us how they succeed in preventing mastitis, if perchance, they do succeed better than the rank and file. When an old practitioner of thirty or forty years experience, and of more than average professional attainment, treats a woman through her confinement and three or four days thereafter, has his attention called to pain in the breast and orders his test treatment, and sees it carried out, and yet the gland goes on to suppuration and gangrenous sloughing and the poor woman is finally saved after a six weeks' struggle with septicæmia, the ordinary physician is apt to feel a little skeptic about the efficacy of preventive treatment, or the success of any management which proposes to carry the cases through without serious systemic shock. A journal article on mastitis usually expends its force in extolling the success the writer has had by the use of some special formula containing belladonna or phytolacca. Another writer always cures with cold and another with heat—thus imitating Gil Blas, who says that heat and cold are the only remedies for the diseases of mankind, if one fails the other will succeed. One fact is quite apparent, physicians too often leave the care of the disease of the nursing breast to the nurse. Probably not more than one-half of the cases occurring receive the attention of the physician from

the start. Thus from sheer want of experience many dismal failures ensue.

The situation as regards broken breasts may be summarized thus: 1. The doctor is often not called until thirty-six or forty-eight hours after inflammatory trouble has commenced. 2. He does not know what to do after he is called. 3. He poultices the breast too much, all treatment being local and not affecting materially anything but the skin. Now if this were different and the doctor enquired after the breast three or four days after delivery, and the moment the patient complained of soreness about the nipples order a shield and tube for the infant, and at once apply adhesive plaster in such a way as to relieve the gland from the tension of its weight, inflammation and suppuration might be prevented. If, however, the soreness has existed three or four days and the patient has chilly sensations along her back and there are hard painful lumps in the glands, he may accomplish good by resorting to the afore-mentioned methods, and, in addition, thrusting a very sharp straight bistoury into and through the indurated lumps. If pus is found the incision may be enlarged to admit good drainage as the bistoury is withdrawn; if not the resulting hemorrhage will generally relieve the vascular engorgement. The bowels should be opened by a saline preceded by a mild mercurial, say 10 gr. of calomel in two doses, three hours apart. Opium should then be given for the same reason that it is given in other inflammatory affections. When suppuration has occurred before the doctor is called, free incision of the abscess should be performed and the wound dressed with absorbent cotton moistened with solution of corrosive sublimate, one grain to the pint of water. It is better to make free openings with the knife than to annoy the patient by deluging putrefying abscesses with antiseptic solutions. The daily use of a syringe for this purpose irritates the patient more than a good free cut made but once.

The aim should be to give the gland as much physiological rest as possible, and while belladonna may be able to arrest granular activity in a physiological sense, practically it can do nothing of the kind while the baby is tugging at the other breast or while the maternal impulses are encouraging the gland-cells to make the most of the blood that is being supplied to them. It is better to look at the matter as it is, and not be satisfied with treatment which is theoretically sound, but has been found in practice of no use. The firm and uniform pressure imposed by properly applied adhesive plasters does more to accomplish physiological rest for the mammary gland than any drug that has heretofore been employed.—*The Med. Age.*

TREATMENT OF UTERINE DISPLACEMENTS BY MEDICATED TAMPONS.

By ROBERT BELL, M.D.

It will perhaps be advisable to travel over somewhat familiar ground and glance at some of the symptoms induced by various displacements. Many of the pathological conditions induced by the flexion are not so thoroughly relieved when the cause is removed by the application of a pessary as when the uterus is supported by the tampon. This will be obvious when we recognize that the tampon acts also as a depleting agent. We are all familiar with the great power glycerine exerts in abstracting fluid from an œdematous tissue; this power is very much enhanced when the glycerine contains alum in solution. Moreover, the alum, by its astringent properties, gives tone to the vaginal wall and the uterine wall and supports. The tampon, therefore, when saturated with a solution of this salt in glycerine, and properly applied in flexions or versions, acts in three different and beneficial ways—1, as a support; 2, as a depleting agent; and 3, as an invigorating agent to the uterus and vagina. If we take a typical case of retroflexion and observe the objective symptoms only, what do we find on making a digital examination per vaginam? If the displacement has existed for some little time, the uterus as a whole will be found enlarged and flabby. This, of course, may be partly ascribed, in one who has borne children, to subinvolution of the organ; but that it is not always due entirely to this fact is evidenced by this hypertrophy occurring in nulliparæ who are subjects of retroflexion. The os and uterine canal will be gaping and patent throughout, and from it will ooze a continuous stream of acrid, muco-purulent discharge, often so irritating in its nature as to induce vaginitis. The vaginal portion of the cervix is excoriated; its mucous membrane bulges out, producing ectropion. The uterus, but more especially the retroposed fundus, is acutely sensitive to touch, and there is frequently hyperæsthesia of one or both ovaries. Now it is quite evident that all these symptoms are not due to the mere fact of the organ being retroflexed, but to the effects of the altered relations of the fundus and body to the cervix, and the consequent traction upon the blood-vessels, but more especially upon the veins. The hypertrophied organ, if complete rest is not enjoined, may by degrees become more

and more prolapsed till at length the flexion will be cured at the expense of a procidentia. We will not, however, follow the progress of the malposition so far as this, but study it only as a retroflexion. By degrees, of course, the circulation will accommodate itself to the altered circumstances, and the acute stage gradually give place to the chronic, when sensitiveness to touch will in like ratio diminish. Yet the general symptoms of distress do not disappear as a coincidence, nor have the difficulties of treatment been removed. I have seen, in a considerable number of instances where a retroflexion has been suddenly produced by a fall—very frequently on the ice—most obstinate metorrhagia induced. In these cases, however, it was noteworthy to observe that the train of acute symptoms did not present themselves, as congestion was naturally absent. Yet what, to my mind, is an important factor of inflammation of the uterus in every case of retroflexion was present, viz., the checking of the venous return-flow by compression of the walls of the vessels at the point of flexion.

By virtue of the tubular and elastic construction of the arteries the circulation in these is not much interfered with at first, and so the blood is constantly pumped into the uterine tissues in larger quantities than it can be carried away by the veins, in consequence of their flaccid walls being unable to resist the compression exerted upon them at the seat of flexion. These frequently give way, and then we have metorrhagia, or, if they do rupture, congestion supervenes. That this is due to the interference with the venous circulation is proved by the fact that if the uterus is immediately replaced and retained in its normal position the hæmorrhage will speedily cease and the natural order of things be soon reëstablished. This compression, when hæmorrhage is not induced, further reflects an influence on the ovaries, in consequence of the ovarian veins having to do duty for the uterine vessels. These are constantly surcharged, and congestion of the ovaries may result. In this way we can account for neurasthenia of the ovaries in subjects of metritis and endometritis, which neurasthenia entirely disappears when the inflammatory condition of the uterine tissue is removed by proper treatment, thereby demonstrating that the congestion of the one is entirely dependent on that of the other, and that the oöphoritis is, as it were, a prolongation of the metritis through the medium of the ovarian veins. When we consider these veins are devoid of valves, this is rendered

still more valuable. If this is the correct explanation of the congested state of the organ and its lining membrane in retroflexion, it also explains the *modus operandi* in the production of the general hypertrophy which rapidly becomes a part of the disease, and aids largely in making the retroflexion more and more acute. True, the copious secretion of muco-purulent matter in some degree relieves the overloaded tissues, but it does not ease the pathological condition; on the contrary, it becomes a serious symptom of the disorder. On the other hand, the menorrhagia which usually takes the place of the normal menstrual flow gives temporary relief to the local symptoms, but at the expense of the general health, and thus in the long run seriously reacts, by reducing the vitality of the patient, upon the already enfeebled womb.

It will be obvious, then, if we can, while taking advantage of the depleting power which glycerine is known to possess, at the same time augment its power in that respect by the addition of an agent which will simultaneously, by its styptic powers, reduce the arterial supply, and by its astringent properties induce contraction of the uterine muscular fibres, and thus naturally assist in the expulsion of the venous blood,—I say it will be obvious that we will to a very considerable extent counteract the evil effects of the malposition. Now, alum is endowed with these powers in a most marked degree. It has the further advantage—and it is no inconsiderable one. I can assure you—that it does not stain the underclothing of the patient, like some other astringents. It is still further to be recommended because of its effect on the catarrhal discharge, which it coagulates, and consequently prevents its decomposition. By this effect it destroys the irritating properties of the discharge. Under its employment by means of the tampon, as a result of this property, I believe, papillary ulcerations rapidly disappear and hypertrophy of the cervix subsides. In simple endocervicitis, which, I am of opinion, in a great number of instances, if not actually induced, is at least rendered chronic by decomposition of the natural secretions, it proves of immense benefit. If to the therapeutic properties which the medicated tampon possesses we add its ability to act as a support, when properly applied, to the dislocated fundus, and, moreover, that it can be gradually made to exert an increasingly greater amount of power as the hyperæsthesia of the uterus becomes reduced, it must be acknowledged that it can be employed as a pessary when the

ordinary vaginal pessary would be a most dangerous instrument to insert. The tampon forms a bed for the dependent fundus to rest upon, and it is easily moulded to suit the exigencies of the case. Each successive tampon by degrees elevates the fundus until it is made to occupy its normal position, while simultaneously the hypertrophy and congestion are being removed by the therapeutic properties of the medicaments with which the tampon is saturated. When the normal position of the uterus has been reëstablished, it is retained there either by a continuation of the treatment for a little time, or, if it is thought more advisable, by the application of a well-fitting vaginal pessary. It not unfrequently, however, has happened in my experience that the tampon has accomplished all that could be desired, a complete recovery having been the result, and this often when a pessary has been worn for years without affording relief. In like manner, when prolapsus is present, especially when due as it frequently is, to a greater strength being thrown upon the uterine ligaments and vaginal wall by the constant dragging of a subinvolted organ, we observe the immense benefit derived from this tampon. It matters not whether the hypertrophy, as in subinvolution, is the primary cause, or whether it is secondary to the prolapsus, which we know often is the case,—I say it matters not how the prolapsus has been produced, or in what manner the hypertrophy has arisen, we obtain the dual effect of the tampon and relief of the symptoms.

Its application is rapidly followed by a reduction in the size of the organ, a cessation of the uterine catarrh, and a healing of any excoriation that may exist. At the same time the uterus rises in the pelvis and speedily assumes its normal position. In cases of ruptured perineum or troublesome retrocele and cystocele it is my invariable habit to precede operative interference by a course of tampon treatment. It tends very much to ensure the success of the operation by reducing the bulk and weight of the uterus, and in consequence renders it more easy to obtain a successful result. For the same reasons this method is most useful in procidentia. I confess this appears, on the face of it, to be a bold statement; but I can assure you the results I have obtained in what appeared to be most unpromising cases of this disorder are most gratifying. A body called on me a few days ago, whom I treated for this complaint some four years ago, and whom I completely lost sight of. When

she appeared I naturally concluded she had returned for further treatment ; but, to my surprise, she informed me she had been in perfect health since I last had seen her, and that she had never suffered from any inconvenience in the womb all that time. Even if treatment by tampon does not always so completely relieve, it invariably paves the way to employment of ring or other pessary.

In anteversions and anteflexions it appears to me to be the only plan where anything like satisfactory results can be obtained. In anteversion more especially—and, mark me, I do not forget that a greater or less deviation forwards may exist without this being any more than normal; but where the uterus is actually horizontal, the effect of 14 or 21 days' treatment has, in a number of instances, proved most remarkable.

When there is anteflexion, however, the task is not so easy. A case of this kind in a nullipara (which, by the way, is still under treatment), wherein the flexion was so acute that the fundus lay close to and at as low a level as the os, has taxed my patience very much. This patient came complaining of persistent morning sickness, which had been more or less severe all her married life, but latterly had become so inveterate as to be almost intolerable. Besides, this, she suffered most intensely at the menstrual periods. After having been treated by several medical men, as she said, for her stomach, I was asked to ascertain if the symptoms could be accounted for by any uterine ailment. The knee of the flexion was more in the body than at its junction with the cervix, and I could by no means get the sound to pass beyond the point of flexion. I therefore proceeded to treat the displacement by pushing up the fundus and supporting it by a tampon tightly and firmly packed in below it. After two or three weeks of this treatment the sickness began to abate, and now the uterus is almost straight, and the vomiting has entirely ceased.

Mrs. M., æt. 23; married two years ; sterile; menses regular, but always accompanied by severe pain; copious leucorrhœa; bladder very irritable, and consequently desire to micturate is very frequent. On this account she cannot sleep for more than $1\frac{1}{2}$ hours at a time. When the bowels move there is always pain referred to the womb. There has always been dyspareunia. Sexual desire was normal during the first few weeks of married life, but after that it completely disappeared. Is very low spirited and weak. On examination

per vaginam the uterus was found to be acutely sensitive to touch, and anteflexed. There was a stricture of the internal os. This examination was made October 17 last, and on that day I commenced treatment by reducing the displacement and keeping the fundus in position by means of medicated tampons applied twice a week. December 19, I find the uterus can be manipulated freely without suffering. Sleeps all night without being disturbed by any of the old symptoms. Sound passes easily, and this is unaccompanied by undue pain, and the position of the uterus is normal. There is still, however, a considerable amount of uterine catarrh. Jan. 3. Patient says she has not felt so well for three years as she does now. Menstruated five days ago, and without pain. There is still some catarrh, but the uterus is free from undue sensitiveness. Rectum is loaded with hardened feces. Ordered an enema, consisting of a pint of thin gruel, with a desert spoonful of common salt added, to be used every second day. Applied the tampon. 26th. Uterus in normal position and free from tenderness. Has again menstruated, and without pain. Feeling quite well, cheerful, and light-hearted. In cases such as this, where there is much uterine catarrh, I am in the habit of supplementing the tampon treatment (which is renewed every three or four days) by intra-uterine medication once a week. This consists of a saturated solution of iodine (320 grams) in liquefied carbolic acid (8 oz.) to the whole length of the canal, or to as great a portion of it as can be reached without employing any undue force. Having first ascertained the direction the canal takes by means of the sound, the applicator, which is made of soft copper wire, is bent accordingly, and, having been covered with a piece of absorbent cotton for two inches of its length, is dipped into the solution and introduced into the uterine cavity, and allowed to remain for a few seconds (I generally allow it to do so during the time I am preparing the tampon). When it has thus been permitted to remain in the uterus it will be found that the uterine walls will have contracted firmly on the instrument, and it will require some little traction to remove it. When the uterus is flabby and patulous and the walls thickened, this will be found to assist materially in removing the diseased condition. I will now give two cases of *retroflexion* treated on the lines I have indicated.

Mrs. B., æt. 35, June 21 last. She had one child a year old; said she had never known what it was to feel well since it was born.

Severe backache, pain on going to stool, and frequent desire to micturate. Very weak and low-spirited, and had lost very considerably in flesh lately. Menses regular but copious, and accompanied by severe pain during the whole first three days. A specialist had diagnosed a retroflexion and introduced a Hodge's pessary; but since this had been done the pain in the back had become more acute, and general symptoms were worse. I removed the pessary. The mucous membrane of the vagina was hyperæmic and sensitive, so that a digital examination was not accomplished without considerable pain. This, however, revealed an acutely retroflexed uterus, which was also very much hypertrophied. The whole organ was very painful to the touch, but this sensitiveness was very much aggravated at the fundus and body. The os was gaping and the whole canal patulous, and from the os was exuding a muco-purulent discharge. Applied a tampon behind the fundus, which was removed at the end of three days, and another applied. This bi-weekly application of the tampon was continued for a fortnight, when the menses appeared.

The flow lasted for seven days, and although very copious, it was accompanied by considerably less pain than on the previous occasion. When the discharge had ceased the treatment was again resumed, but, in addition, the carbolic acid and iodine solution was applied once a week to the whole area of the uterine canal. This routine was carried out for two months, during which time the symptoms steadily improved, and the dysmenorrhœa and menorrhagia also abated, the patient expressing feeling very much improved in every way.

She could now walk a little distance without pain, whereas before every movement was accompanied by intense suffering. Uterus was at this time retroverted, flexion having completely disappeared; but there was still considerable hypertrophy, and the catarrhal discharge was copious; this, however, had now ceased to be purulent. The vagina, too, was free from the hyper-sensitiveness that had previously existed, and the uterus, except at the fundus, was also free from tenderness. The symptoms having so far improved, the bi-weekly attendance was discontinued; and from this time till the middle of October I only saw patient once a week. At this date she returned home, feeling quite well. At my request she came to see me after the next monthly period had passed, when she informed me it had

continued only four days, was moderate in quantity, and free from pain. She had been going about her usual household duties, but said "over-fatigue always made her feel she had a back." The uterus was, however, in good position and of normal size; but as a precautionary measure I introduced a Hodge's pessary, which she is still wearing. I have heard from her several times during the last two months, and she is feeling quite well.

Mrs. M., æt. 30, married seven years, nullipara, consulted me about two years ago in consequence of severe and prolonged menorrhagia. Weak and anæmic. Was seldom free from discharge for more than a day or two at a time, and there was, indeed, considerable hæmorrhage when I first saw her. At first I was inclined to attribute the flooding to the presence of a fibroid, as a considerable tumor could be felt in the recto-vaginal *cul de sac*. This, however, proved to be the hypertrophied fundus retroposed. The whole uterine texture was flabby and hypertrophied, but not at all painful to touch. The canal was patulous and admitted the sound readily, which revealed a granular condition of the mucous membrane. Having rectified the position of the organ, I applied fuming nitric acid to the whole extent of the canal, and introduced a tampon behind the body and fundus, and directed the patient to use an ergotine suppository (4 grs.) every six hours, and to remain quietly in bed. Three days afterwards the tampon was removed, when it was found that the hæmorrhage had been arrested. Another tampon was applied, and allowed to remain for a like period, and the ergotine suppositories ordered to be continued every 12 hours instead of every six. On this second tampon being removed there was detected a slight oozing of colored discharge, so fuming nitric acid was again applied, and, the tampon treatment persevered with. It was not deemed necessary to have recourse to the caustic again, as the hæmorrhage was checked so far.

There was still present, however, considerable menorrhagia for some time afterwards, and the menses recurred too frequently, but these gradually became more normal, both as to time and quantity, under a weekly application of the carbolic acid and iodine solution, and a bi-weekly use of the tampon. The uterus also became reduced in size and attained its natural position, so that by the end of four months every sign of disease had disappeared. I did not deem it necessary in this case to introduce a pessary into the vagina, as the

cure seemed complete. I did not see her again until the end of last year, when she called upon me, greatly distressed, though she looked the picture of health.

She said she was afraid some other disease had attacked her, as she had not menstruated for four months, and there was a swelling in her abdomen. Her fears, however, soon gave place to joy when I was able to inform her that she was pregnant, and that this alone accounted for her symptoms.

I should, perhaps, add that the tampon varies in size with that of the vagina, and that it is as well to attach a piece of fine cord to it to make its withdrawal easy of accomplishment. The proportion of alum to glycerine is one in eight, and to every 80 ounces an ounce of boracic acid is added to keep the tampon from becoming fœtid, which it otherwise would do if the discharge from the uterus is at all copious. The tampon itself is composed of carded cotton.—*Edinb. Med. Jour.*, March.—*N. Y. Med. Abstract.*



MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The regular annual meeting of the American Medical Association, which convenes in Washington, D. C., on the 6th of May, promises to be one of the largest and most enjoyable ever held by the Association. In accordance with a constitutional amendment adopted by the Association at its last meeting, it is required that meetings shall be held at the National Capitol as often as once in every four years. The coming meeting inaugurates this feature of the constitution. It is already apparent that the selection of Washington as the most suitable city to draw out the full force of the American profession was a wise and judicious act. As the seat or government of a large and prosperous nation, it is eminently adapted to the purposes designed to be carried on by large scientific organizations. It is there that science, art and literature should receive the utmost fostering care; it is there that governmental protection and aid should be sought in behalf of all of those interests which most affect the citizens of our country. Meeting under the very shadow of the dome of the nation's capitol, the American Medical Association can best

assert its claim to national recognition and the more successfully call attention to the purposes it seeks to advance. Apart from the above considerations the local attractions of Washington are almost innumerable. The coming meeting will find the city clothed in the beauty and freshness of spring. At no time will its parks, gardens and splendid avenues show to finer advantage. Congress will be in session so that all who desire to witness the deliberations of the two Houses will have an opportunity of doing so. Among many other objects of attraction, the U. S. Capitol, Treasury, War, Navy and Interior Department buildings, Smithsonian Institution, U. S. Museum, Agricultural Department, Navy Yard, Arlington, Mt. Vernon and the Soldiers' Home Park, are places well worth seeing.

We are able to present at this time the following facts bearing upon the coming meeting. The Chairman of the Committee, Dr. A. Y. P. Garnett, has organized an efficient working force from the profession in the District, appointed sub-committees on reception, entertainments, railroads, printing, etc.—and the work is already far advanced. The place of meeting will be the Congregational Church, corner 10th and G Streets, with rooms for the Sections in the church and in Armory Hall opposite. Masonic Hall, corner of 9th and F Streets has been secured for the use of Exhibitors of Drugs and Surgical Appliances. The prospect is that there will be the finest exhibition of the kind yet displayed. The profession of the District has responded liberally to the call of the Committee. A reception will be given to the Association by the physicians of Washington at Armory Hall; a reception by the President of the United States, as many private receptions by prominent citizens as time will allow; and it may be a reception at the U. S. National Museum. Arrangements have been made with the railroads of the Grand Trunk Combination—including all lines North and West as far as Chicago and St. Louis—to return delegates paying full fare to Washington at one-quarter rate. It is probable similar arrangements will be made with the railroads of the South, South-west and as far West, as negotiations are now pending. Delegates and their families are included in this arrangement. From the care that has been exercised by the President of the Association, Dr. Austin Flint, and by the Chairman of the Sections, and that, too, of more than ordinarily interesting character.

It will thus be seen that everything has been done to make this

forthcoming meeting of the Association the largest in attendance, the most influential in scientific value, and the most enjoyable in its social features of any previous reunion of this body. We trust there will be a grand outpouring of the profession far surpassing anything in the previous history of the Association. We must add that the hotel capacity of Washington is immense and will amply accommodate all delegates. Should their capacity be unduly taxed, Baltimore, with its excellent and ample hotel accommodations, is within forty-five minutes ride. Delegates will find in our city many objects of interest. We cordially invite all who can to take in the beauty and attractions of the City of Monuments.—*Maryland Med. Jour.*

MEDICAL COLLEGE OF VIRGINIA.—The Board of this institution will meet on the 6th of May to elect four professors. Dr. Coleman, the late distinguished Professor of Obstetrics, being dead, his chair must, of course, be filled. The voice of Dr. James B. McCaw, Professor of Practice of Medicine, has become so seriously impaired by his late severe illness that he is unable to stand the strain of the continuous effort unavoidably required in a six-months' course of lectures, and for this reason he has resigned. Professors Tompkins and James having determined to become candidates for the vacant chairs as more congenial to their tastes than those which they now hold, to afford transparently fair opportunities for competition to all candidates for all the vacant chairs, have resigned their positions in the chairs they now hold—viz., Anatomy and Materia Medica and Therapeutics. No doubt there will be plenty of candidates from which the Board will be able to select competent Professors for all the places, and the College will proceed in its present course of usefulness.

It will be seen by an advertisement on another page that the Visitors Board of the Medical College of Virginia, of Richmond, will meet 6th May to elect a new faculty, to supply the vacancies caused by the death of Dr. Coleman, and the impairment of voice of Dr. McCaw. We trust that only good and experienced teachers may be selected.

OBITUARY.

DAVID T. TAYLOE, M.D.

There has recently passed away from among us, a member of our body whose name and memory will long be cherished and remembered. We mean the late Dr. David T. Tayloe, of Washington, North Carolina, who died on the 25th of March, 1884.

Dr. David T. Tayloe was born in Washington, N. C., on the 21st of February, 1826, the son of Col. Joshua Taylor. In 1846 he graduated with distinction from our State University at Chapel Hill, after which he immediately commenced the study of his profession under Dr. John Norecom who stood in the foremost of the profession. Dr. Tayloe graduated from the Medical Department of the University of New York in 1849, and entered the practice of medicine in Halifax County, where he remained until the death of Dr. Allen, which created an opening in his noted town, to which he at once returned, to occupy a field of great usefulness, to the date of his death. He filled at different times offices of high trust and responsibility and declined any promotion that would interfere with his professional duties. During the war he was assigned to duty as surgeon of the 61st Regiment of North Carolina troops and filled the position with zeal, courage, patriotism and energy.

Dr. Tayloe, was a physician of the type which is the pride of our profession and an honor to the science of medicine; or rather it should be said he was a physician typical of this class. His intellectual culture was not inferior to his medical culture, and this was of the highest order. He was more than a physician in a literal sense; he was a man of refined taste and an accomplished classical scholar and retained through life early acquired love for the ancient poets, philosophers and historians. While he ever kept himself well abreast of the scientific and practical literature he was in every sense a well informed man. In a social point of view he had few peers and no superiors. Generosity, courage and tenderness were strongly developed in his character. He could battle with vigor but without bitterness; if he inflicted a wound it left no sting. The natural kindness of his heart appeared in all his bearings; he could give but little offence because the natural kindness of his heart appeared in all his impulses and even his opponents recognized the generous nobility of his motives and could not fail to find an opportunity to become his friends.

It is seldom that any event has caused so general and deep sympathy, or that the death of any physician has been felt by so many as a personal loss and a matter of public regret. His sudden removal from laboring in a sphere of usefulness in which he never spared himself is a mysterious and solemn dispensation. The blank caused by his death, is to his numerous relatives and friends, irreparable. His memory will long be dear to many to whom his familiar presence was a daily refreshment, and ever present in the minds of those whom he unconsciously and irresistibly drew toward him—his pupils, his professional brethren, his patients and the public.

McD.

P. W. YOUNG, M.D.

No event which has transpired in our town has ever given more sincere regret and heart felt pain and sympathy than the death of this beloved man and valued physician, which occurred at his home here on Friday night last. It seems a strange meting of Providence that one had ministered so faithfully and efficiently to the sufferings of his fellow man, should himself have been called upon to bear so much of unyielding affliction. But long ere the summons came, he was ready to go. Yea, anxious for that peace and rest which faith in the Blessed Redeemer brings. "For he believed it would be well with him Hereafter." Dr. Young graduated in medicine from Philadelphia in 1852 and settled at Oak Hill in Granville county. In a few years he married a daughter of Mr. J. C. Cooper, Sr., and moved to Oxford. And here has been the field of his greatest labor and usefulness. He was doing before the war the most laborious and extensive practice. But when hostilities were declared he went with the Granville Grays to Norfolk, and then soon became Assistant Surgeon of the 12th Regiment. Next we hear of him in the war, he is transferred to the 38th Regiment in the army of Northern Virginia. Afterwards he became Surgeon of Scales' Brigade, in which he won a splendid reputation as a skilful operator, and greatly endeared himself to the officers and soldiers with whom he was thrown.

Coming home after the war he found plenty of work to do, and busy has he been since that time, gradually becoming the leading physician of our town and section. When his practice became so great he associated with him first, Dr. L. C. Taylor, then Dr. Z. M. Paschall and after Paschall's death he took in Dr. S. D. Booth, who so faithfully attended him and watched over him in his lingering illness. Dr. Young had a taste, a fondness and a commendable ambition in his profession, that readily won confidence and success. In the sick room he was gentle, always cheerful and sympathetic. He had a heart full of the milk of human kindness and sympathy, as many of the afflicted poor can testify. He delighted in books, and his literary taste was very pronounced. He never thought his measure of knowledge was full, but sought light and information to the last. He greedily devoured every treatise and new book that pertained to his profession. Taken all in; all his knowledge of medicine, his skill as a surgeon, and in all those intricate accomplishments that make up the ready and successful physician, he probably had but few equals in the State. Though having attained his 55th year and being possessed of a most varied and valuable experience, he did not live in the past, but valued it for the light it furnished. He was progressive in his instincts and in his practice, well equipped and always full of resources. No man amongst us has ever laid down his armor of usefulness, to rest, with more of the sympathy, the prayers and blessings of our people upon him.—*Exchange.*

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Annual Catalogue of the Louisville Medical College Louisville, Ky. Session of 1883-84. Louisville, Ky.: The Gilbert & Mallory Publishing Company. 1884.

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Report to the Secretary of the Treasury on the Administration of the National, Quarantine Service and the Epidemic Fund. February 23, 1884. Washington: Government Printing Office. 1884.

Iodoform in Dental Surgery. By C. F. W. Bödecker, D.D.S., M.D.S., New York. Reprinted from the Independent Practitioner of March and April, 1884. Office of the Independent Practitioner, Buffalo, N. Y.

On the Pathology and Treatment of Gonorrhœa. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin. Twelfth Edition. New York: William Wood & Company, 56 and 58 LaFayette Place.

Transactions of the New York Medico-Chirurgical Society. The Present Volume Includes the Transactions of the Society, as taken from the Secretary's Records, for the Year 1883. New York: Printed for the Society. 1884.

Arrest of Development Caused by Intra-Uterine Pressure. By H. F. Hendrix, M.D., Lecturer on Obstetrical Emergencies, in the College for Medical Practitioners, of St. Louis. Reprinted from the St. Louis Medical and Surgical Journal, February, 1884. St. Louis: Medical Journal Publishing Company, 2622 Washington Avenue. 1884.

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1883. Annual Report of the Presbyterian Eye, Ear and Throat Charity Hospital, open daily for patients from 1 o'clock to 4 P. M., No. 77 Baltimore Street, Baltimore, Md. Baltimore: White & Graham, Printers, 20 Second Street. 1884.

Diagnosis and Treatment of Diseases of the Heart. By Constantine Paul, Member of the Academy of Medicine; Physician to Lariboisière Hospital. Translated from the French. New York: Wm. Wood & Company, 56 & 58 LaFayette Place. 1884. Pp. 355.

Before the Committee on Public Health of the House of Representatives. In the Matter of the Consideration by the Committee of House Bill No. 2785. Argument of J. Coleman, of Counsel, Submitted March 20th, 1884. Washington: Government Printing Office. 1884.

The Prevention of Puerperal Infection. A Study of Antiseptic Practice in the Maternity Hospitals of Paris, Prague, Berlin, Parma, Glasgow, Copenhagen, and New York. By Simon Baruch, M.D., Gynecologist to the Northeastern Dispensary. Reprinted from the New York Medical Journal for March 22, 1884.

Drugs and Medicines of North America, A Quarterly Devoted to the Historical and Scientific Discussion of the Botany, Pharmacy, Chemistry and Therapeutics of the Medicinal Plants of North America, their Constituents, Products and Sophistications. J. U. Lloyd, Commercial History, Chemistry and Pharmacy. C. G. Lloyd, Botany and Botanical History. Cincinnati: J. U. & C. G. Lloyd, 180 Elm Street. 1884. Press of Robert Clarke & Co.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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ORIGINAL COMMUNICATIONS.

ZINC IN DRINKING WATER.

Read before the Mitchell Society April 12, 1884.

By Prof. F. P. VENABLE, University of North Carolina.

The increase in the use of galvanized iron especially in the forms of tanks for storage of water and pipes for conveying it has led to a reöpening of the question as to the possible injurious effects from the use of such water. It is a matter of importance then to see how far our knowledge extends on this subject and I will collect here all of the known facts as far as I have been able to get at them.

The so-called galvanized iron is, of course, nothing more than iron dipped in a bath of zinc and so superficially coated with it and apparently to a certain extent alloyed with it. The character of the protection afforded the iron is galvanic (hence the name), the two metals forming a galvanic couple so that under the action of any exciting liquid the zinc and not the iron is attacked. That zinc dissolves in potable waters has long since been shown by the experiments of Boutigny, Schaueffele and Langonné. Distilled water and rain water dissolve it more readily than hard water. Especially is

water containing carbonic acid capable of this solvent action and most of our spring waters contain more or less of this acid. So much may be taken up that the water becomes opalescent and acquires a distinctly metallic taste. It seems that by the action of the water, hydrate and carbonate of zinc are gradually formed and that this action is more rapid in the presence of certain saline matters but is weakened by the presence of calcium salts.

As to the injurious effects of such waters, authorities differ. Fonssagrives has investigated the question consulting the statistics of the French Navy and the recorded experiments of others, adding, however, none of his own. The French Government had before this appointed a committee to make a special report on the subject and the investigations of Roux in 1865 and 1866 furnished evidence enough of possible injury to health from the use of water stored in galvanized iron tanks to lead to an order from the Minister of Marine prohibiting such tanks on board ships of war. Boutigny attributed grave effects to the use of these zinc-containing waters, looking upon it as probably resulting in epilepsy. Fonssagrives, however, maintains that the zinc is not cumulative and produces no bad effects unless taken in large doses. Doubt is thrown on his position though by the fact that his assertions as to the limited solubility of zinc in ordinary drinking water are not sustained by experiment. Without doubt such waters have been used for considerable lengths of time and no injurious effects have been noticed. This may have been due, however, to the hardness of the water and hence the small amount of zinc dissolved. Pappenheim states in contradiction to the assertions of Fonssagrives that zinc vessels are dangerous and must be carefully avoided. Dr. Osborne, of Bitterne, has frequently observed injurious effects from the use of waters impregnated with zinc. Dr. Stevenson has noticed the solvent action of rain water on galvanized iron and states that probably its continued use would cause injury to health. He recommends as a convenient test for the presence of zinc in potable waters the addition of potassium ferrocyanide to the filtered and acidulated (with hydrochloric acid) water. Zinc gives a faint white cloud or a heavier precipitate when none is present. Dr. Frankland mentions a case of zinc poisoning where well water containing much dissolved oxygen and but little carbonic acid was used after passing through galvanized iron pipes. Prof. Heaton has recorded the analysis of a spring

water in Wales and a second analysis of the same water after passing through half-a-mile of galvanized iron pipe showing that the water had taken up 6.41 grains of zinc carbonate per gallon. A similar instance of zinc impregnated water has come under my own observation and I append the analytical results. The water from a spring two hundred yards distant was brought by galvanized iron pipes to a dwelling house and there stored in a zinc-lined tank which was painted with white lead. The water became somewhat turbid and metallic tasting and its use for drinking purposes was discontinued. The analyses were made after the pipes had been in use about one year. The spring water was analyzed and also the water from the tank and that caught directly from the pipe.

The analysis of the spring-water, made under my direction by Mr. J. C. Roberts gave the following figures (denoting grains per gallon of 231 cubic inches):

Silica,	. . . . .	2.45	grains.
Lime,	. . . . .	.23	"
Magnesia,	. . . . .	.17	"
Alkalies,	. . . . .	.43	"
Chlorine,	. . . . .	.35	"
Sulphuric acid,	. . . . .	.19	"
Carbon dioxide,	. . . . .	.45	"
Total residue,	. . . . .	4.34	"

On examining for zinc the other two samples taken as above I found

	Tank.	Pipe.
Zinc carbonate, . . .	4.48	4.29 grains.
Iron carbonate, . . .	trace.	trace.

It is evident then when the dangerous nature of zinc as a poison is taken into consideration that the use of zinc or zinc-coated vessels in connection with water or any food-liquids should be avoided, and, indeed, prohibited wherever the health officers have it in their power to do so.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.—At the meeting of this body, just adjourned, Dr. Thos. S. Latimer was elected President, and Dr. J. R. Quinan and J. E. Atkinson, Vice-Presidents.

SELECTED PAPERS.

ABSTRACTS OF THE LUMLEIAN LECTURES ON THE ÆTIOLOGY OF PHTHISIS.

Delivered at the Royal College of Physicians.

By J. ANDREW, M.D., F.R.C.P.

Physician to St. Bartholomew's Hospital.

The ætiology of phthisis covers so wide a field, requires for its complete discussion so many different lines of inquiry, so many different methods of research, that it would be absurd to attempt to teach it in detail within the time at my disposal here. Nor was such my intention in adopting these words for the title of these lectures. It was convenient to have a short heading, and one which would allow me the fullest liberty to choose, from any quarter, whatever facts or arguments there may be available for my more limited purpose. Far from attempting an exhaustive treatment of so vast a subject, I shall regard it from one comparatively narrow point of view—viz., the communicability of the disease immediately or mediately from the sick to the healthy. Is or is not phthisis contagious?

* * * * * * *

At the very outset of the inquiry, a difficulty confronts us which has never hitherto been satisfactorily met, which I, at any rate, cannot hope to remove, but over which I must somehow contrive to stumble. It is the definition of phthisis. All that I can do is to state the sense which I myself attach to the term phthisis, and to beg that my argument may be judged of by reference to that and not to any other description. Of course it must be so framed as not to beg the question under discussion, and must therefore be imperfect. By phthisis, then, I mean a specific disease, characterized, anatomically, by a new growth, which may wear very different aspects at different periods of its existence, and in different organs of tissues, especially, according as it is found in the interior of organs or as it presents upon a free serous, mucous or cutaneous surface. The new growth may occur in almost any organ or tissue, but does so most frequently in the lymphatic tissue and in the lungs. Generally it proceeds from numerous different points, the growths from which may or may not coalesce, thus leading, e. g., in the lungs to

two different types of lesion, viz., miliary tuberculosis, and to more or less extensive areas of infiltration and consolidation.

Further, in the case of the lungs, this new growth does not follow the general law of distribution or localization of pulmonary diseases. It has some special affinity for the apices, and descends in levels, attacking the upper portion of the lower before it has reached the base of the upper lobes. It kills by the disturbance and disorganization which its presence works in some vital organ, and thus the disease answers roughly to the old definition of Joannes Marifeldus, in the fourteenth century, in his *Breviarum Bartolomei*, the earliest medical work by any member of the staff of St. Bartholomew's Hospital, with which I am acquainted, "ptisis est ulcus pulmonum cum consupsione totius corporis," (*Anecdota Oconiensia*, vol. i, part i, 1882.) But its clinical history is that of a general rather than that of a local disease; the constitutional symptoms, especially in the earlier stages of the disease, bearing no definite relation to any ascertainable structural lesions.

In the words of Dr. P. M. Eathan, "pulmonary consumption is no more than a fragment of a great constitutional malady, which it would be in vain to think of measuring by the stethoscope, and which it belongs to a higher discipline than any mere skill in auscultation rightly to comprehend" (*Latham's Works*, New Sydenham Society, vol. ii, p. 171).

I know, only too well, that this definition, if I may call it so, bristles with controversies of fact and of theory. Let it be taken then as the expression of my belief, that consumption, phthisis, tuberculosis, is a specific disease occurring in both acute and in chronic forms; that it is not a mere catarrhal inflammation, a peribronchitis, a chronic apex-pneumonia, but a disease as distinct in its nature as scarlatina, or as gout. And further, let me here add, that a very large, if varying, proportion of deaths caused by chronic lung-diseases are rightly attributed to it.

* * * * *

The question of the contagiousness of phthisis must be beset by peculiar difficulties, for in no other cases has the discussion raged so long without even yet leading to any generally accepted conclusion. To this conclusion it is now necessary for me to mention the well known names of those who, at different periods, have taken, some one, some the other, side in the dispute. The recent discovery of the

tubercle-bacillus, and the consequent addition to the old stock of argument of a fresh fact of the utmost importance, must be my excuse for venturing to bring so trite a subject before you. It seemed to me all the more allowable to do so, because the bacillus has been looked upon by many as a conclusive proof of the doctrine of contagion in its most extreme form; and as often happens when some striking discovery, some fruitful generalizations, has just been made, a strong tendency has been shown to treat the older views and observations with contempt. In order to estimate the influence of our knowledge of the bacillus upon the doctrine of phthisis, I shall endeavor, first, to state the position of that doctrine with the value of the facts on which it was based, prior to Dr. Koch's discovery; and, secondly, to discuss the modifications which that discovery may render necessary in the older views. In this way only can we expect to arrive at a safe conclusion. In carrying out this plan, however, I must ask your forbearance, when, as must often be the case, you find me traversing well-known paths. An advocate would surely do his duty in a strange fashion who omitted to state an argument because it was an old one and hitherto unanswered.

It will be convenient to consider, first, one argument in favor of contagion, apparently of great weight, which was very strongly stated by Dr. Wm. Budd, of Clifton, in his famous Memorandum on Phthisis which appeared in the *Lancet* for October 12th, 1867. He says: "Among the data relating to geographical distribution the following striking facts may be here mentioned. 1. When the South Sea Islands were first discovered, phthisis did not exist there. Since the aborigines have come into intimate contact with Europeans, the disease has not only made its appearance among them, but has become so wide-spread as to threaten their extermination. The contrast between original entire immunity and present extreme fatality is very striking, and can only be rationally explained by the importation of a new and specific morbid germ. Try every other supposition, and the facts are inexplicable; make this our supposition, and they are at once explained. 2. The late Dr. Rush, of Philadelphia, who made very accurate inquiries to determine the point, satisfied himself that, America was first discovered, phthisis was unknown among the native American Indians; now it is very fatal to them. The very significant contrast here exhibited between the past and present history of these two races, in respect of phthisis, is exhibited

at once; and at the present time among the negro races in Africa, in different parts of the area of that great continent. It is well-known that negroes are peculiarly liable to phthisis. Now, everywhere along the African seaboard, when the blacks have come into constant and intimate relations with the whites, phthisis causes a large mortality among them. In the interior, where intercourse has been limited to casual contact with a few great travelers or other adventurous visitors, there is reason to believe that phthisis does not exist. Dr. Livingstone and other African travelers have given me the most positive assurance on this point."

It would be impossible to exaggerate the importance of this statement if it could be established. Fortunately or unfortunately, this seems to be impossible. To take, first, the case of America.

The oft quoted authority of Dr. Rush, when analyzed, is very far indeed from being decisive of the question of the importation of phthisis into North America. It is known that in his "Inquiry into the Natural History of Medicine among the Indians of North America, and a Comparative View of their Diseases and Remedies with those of Civilized Nature," he does not mention consumption. "Fever," he says (p. 20 of London edition of 1789), "constitutes the only disease among the Indians;" and under the head of these fevers he mentions specially "pleurisies and peripneumonia." On p. 21 he asserts that small-pox and the venereal disease were communicated to the Indians in North America by the Europeans, but he did not, so far as I can find, take the same view of consumption. In point of fact, what Dr. Rush states is not merely that consumption was unknown in the northwest of the New World before its discovery by Columbus, but that it was still unknown among the Indians at the time when he was writing in the latter half of the eighteenth century; i. e., nearly three centuries after Columbus, consumption had not been communicated by Europeans to the natives. He gives not the slightest hint of believing in its foreign origin, but regards it, even in its incidence on the Whites, as one of the results of advancing civilization. This he says in "Thoughts on Consumption." (*Op. cit.*, p. 159):

"I shall begin my observation upon the consumption by remarking: (1) That it is unknown among the Indians in North America. (2) It is scarcely known by those citizens of the United States, who live in the first stage of civilized life, and who have lately obtained

the title of the first settlers. The principal occupations of the Indian consists in war, fishing and hunting. Those of the first settlers are fishing, hunting, and the laborious employments of subduing the earth, cutting down forests, building a house and barn, and distant excursions, in all kinds of weather, to mills and courts, all of which tend to excite and preserve in the system something like the Indian vigor of constitution. (3) It is less common in country places than in cities, and increases in both with intemperance and sedentary modes of life. (4) Ship and house carpenters, smiths and all those artificers whose business requires great exertions of strength in the open air in all seasons of the year, are less subject to this disorder than men who work under cover, and at occupations which do not require the constant action of their limbs. (5) Women, who sit more than men, and whose work is connected with less exertion, are most subject to the consumption."

It is clearly unnecessary to draw from this passage any more stringent conclusion than this: that the climate of North America had not sufficed to prevent the development of an hereditary tendency to phthisis among certain of the settlers living under conditions which would have produced the same effect in Europe. It must further be remembered that Dr. Rush writes of the savage tribes of the West and North; but there is reason to believe that phthisis existed in Mexico before the arrival of Europeans. N. M. Bancroft (*Pacific States*, vol. ii, p. 592), speaking of the Nahara natives, the leading tribe among the Aztecs, says: "The diseases most prevalent were acute fevers, colds, pleurisy, catarrh, diarrhœa, and, in the coast districts, intermittent fevers, spasms, and consumption, aggravated by exposure." Even if this statement is not literally true, if some other disease has been mistaken for phthisis, it is still an apt illustration of the uncertain character of the evidence relating to the diseases of the American aborigines. Yet phthisis might easily exist among barbarous races, and escape the notice of even the most competent observer. A savage stricken with phthisis would rarely live to develop the later and more striking features of the disease. The value of his life in the earliest stage would be a vanishing quantity, like the "prairie-value" of land. With the first serious failure in strength of lung or of muscle, the struggle for existence would be promptly decided against him. In the words of Dr. Rush, speaking of deformed children, the severity of the Indian manners

destroys them. And thus civilization, with its care for the sick and weakly, allowing time and opportunity for the full evolution of the disease, would sometimes appear to have introduced that which it had only preserved and, so to speak, cultivated. An almost necessary consequence of this artificial survival of the unfit would be the spread of the phthisical taint, in virtue of its hereditary character (to say nothing of the unwholesome influences of a nascent civilization), and a great increase, both absolute and relative, in the number of cases of phthisis. From this point of view, it is interesting to note even indistinct traces of the existence of phthisis among the people who had attained the highest degree of civilization in the New World, who kept trustworthy records, and even established hospitals for the sick. Nothing can be more unsatisfactory than the reports of the first visitors of any newly discovered land on the diseases of its inhabitants. The writers themselves seem to have been very often singularly unfitted for such a task, and the opportunities at the disposal even of the best qualified observer most insufficient. It could not be possible to learn much during a stay of a few weeks or it may be only days, among a newly found people, speaking an unknown, and unwritten language. Taking the three vast regions specially mentioned by Dr. Budd—regions containing among them nearly every variety of climate and of natural productions—I trust I have sufficiently illustrated the difficulty, if not impossibility, of proving that phthisis was introduced into America from Europe.

In the Pacific, the first European visitors of many of the islands were South Sea whalers, escaped convicts, or, at best, intelligent sailors, like mariners, without any special medical knowledge; certainly not persons well qualified to conduct a very difficult scientific inquiry. It is impossible, in the absence of trustworthy records, to come to any certain conclusion; it is easy enough to meet with statements on either side. A friend, a member of the Melanesian Mission, who has known many of the islands well for some years past, assures me that he believes consumption to have existed among them before the arrival of Europeans. At any rate, twenty years ago, he saw natives dying of what seemed to him to be consumption, in islands which had been visited only by the mission ship, in which no infection had been conveyed. This case is very different with regard to a highly contagious disease like syphilis. There seems little room for doubt that it was in part brought to the islands by European

vessels, and that it is still being constantly reintroduced. Unhappily, it is impossible to deny the great mortality now caused by phthisis among the Melanesians. In the mission-establishment in Norfolk Island, there are about 150 young natives, who stay there for one or two years, to be trained as teachers. Even there, the mortality from phthisis is about two per cent. annually, and in the islands themselves it is probably much higher.

In the case of Africa, it has to be remarked that, although very few white men penetrated into its interior, regular caravan-routes have existed for ages, by which, *e. g.*, starting from the Mediterranean coast, with its thickly set European colonies, any disease so contagious as some believe phthisis to be, must have been spread over the whole interior, even before the time of the Romans. Such a disease, once started, would have travelled surely, if slowly, from one trade-centre to another. By the medium of neutrals, it would pass freely between hostile tribes, and penetrate into the remotest districts. So that the distribution of phthisis in Africa, its prevalence on the coast, and its rarity inland; its being confined to certain parts only of wide regions traversed for centuries by largely used trade-routes, is a strong argument not for, but against, its contagiousness. If its spread depends upon the conveyance of any material germ along the lines of human intercourse, it is difficult to believe that the interior of Africa could have escaped. In a general way, a better explanation of its unequal incidence is to be found in the fact that, in other countries to which phthisis has been long known, and where no question of restricted intercourse arises, it still prevails to a much greater extent near the sea than in the interior. Further, it is not true that phthisis rages among the natives along the entire coast-line. There are singular exceptions to this general rule, even in the case of districts, such as the Gold Coast, being the seat of large foreign trades, exceptions which it is very difficult to explain on the contagium-theory.

Granted, however, for the sake of argument, that it could be established as a certain fact that phthisis has made its appearance among a certain number of savage tribes after the arrival of Europeans, and that it was unknown before that event, surely the importation of a new and specific morbid germ is not the only rational explanation which can be offered.

If, for the time, we adopt the view that phthisis is a diathetic

disease, the outcome of unhealthy conditions of life, especially those connected with the two prime necessities of mankind, shelter from the weather, and food, then it is well-known that the first contact of civilization with barbarism subjects the savage to many most unwholesome influences. He is tempted to indulge to excess in alcoholic liquors, often of the vilest quality. He forsakes his old free life of hunting or fishing for one of comparative inactivity and indolence, hanging about the white settlements, and seeking shelter in the most unsanitary of huts.

What room for surprise is there if, under such changed circumstances, he becomes hable to new forms of diathetic disease? If, however, we accept the doctrine, the true doctrine, that phthisis requires for its production not only predisposition, but also the action of an external agent, probably organic, then a reference to its world-wide distribution on the one hand, and, on the other, to the complete immunity from it which some races, so long as they follow certain modes of life, enjoy, even though like the North American Indian, in Dr. Rush's time, they are in contact with phthysical communities—such a reference will meet the supposition that the impaired vigor of the savage has subjected him to external agents, always present although hitherto impotent, at least as probable as that of an "imported germ."

In the case of the South Sea Islands, the coming of the white man was also followed before long by a great change of diet, by the introduction not only of stronger alcoholic drinks, but also by that of pork in place of their former uncertain supply of flesh-food.

The introduction of European clothing also is attended by grave dangers to health, especially those arising from the intermittent way in which the natives use it, not only at first, but even when civilization has made considerable progress among them. A ludicrous instance of this fell under the notice of a real relation of my own, who settled in New Zealand thirty years ago. Soon after landing, he went up the country in search of a suitable district for a sheep-run, taking with him a native as guide and porter. This man, very lightly clad, carried with him a large parcel, of which he took the utmost care, but for some days was never seen to open it. At last Sunday came round, and then he appeared dressed in the contents of his parcel, viz., a full dress suit of black cloth, with white shirt and necktie. On the Monday he resumed his scanty rags.

It is admitted on all sides that civilization at first brings to bear upon the savages some of the most powerful predisposing causes of phthisis, causes which many of us would have said, a few years ago, are sufficient to produce it in certain constitutions. Surely, then, it is a begging of the question to say that the facts cannot be explained, except on the "imported germ" theory. The same statement might be made with equal truth of gout, or of ague.

I must apologize for having dwelt at perhaps too great a length on this historico-geographical argument, but it forms so important a part of the contagionist statement, it has been regarded as so decisive of the whole question, it made so deep an impression upon myself until in self-defence I was driven to examine the grounds on which it rested, that it seemed necessary to begin by dealing with it. It is also a most insidious argument; one which lies outside ordinary medical studies, and is often stated confidently, and accepted thoughtlessly. If the history of the earliest appearance of phthisis among savages can only be explained on the theory of contagion, there is an end of the matter. All that remains is to endeavor to discover the nature of the contagion, and the mode in which it gains access to its victims, whether in New Zealand or in London. But I trust I have shown good reason for believing that this is not the case; that the facts have come to us in so imperfect and distorted a form as to be worse than useless; for, while they can be made to harmonize readily with either the diathetic or the contagion theory, they are absolutely worthless for the proof of either.

I shall now review the statements which have been made, with more or less truth, as to the influence of certain conditions on the prevalence of phthisis. It is impossible to give in detail the enormous number of facts by which these statements have been supported; but it will be my endeavor, by fairly chosen illustrations, to indicate the kind and value of the evidence on which they rest, and their bearing on the doctrine of contagion.

The geographical distribution of phthisis, the degree in which it depends upon climate, as determined by latitude or by isothermal lines, admits only of the most general treatment. It exists in all climates—tropical, temperate, and arctic—and apparent exceptions to this serve only to bring into strong relief the much greater importance of local than of general influences. According to the common statement, it is more prevalent in the tropics, and, as far as the

absolute number of cases is concerned, this is no doubt true, for the population is many times more dense there than in the north. Whether it is relatively more frequent is a very different question, the final answer to which will require vast statistics yet to be compiled, the labor and the record of many generations. But there are facts which prove that arctic rigours do not prevent consumption.

Moose, Moosonee, a trading store on the north shore of Hudson's Bay, is in the latitude of London, but enjoys a typical arctic climate, viz., a short hot summer, and a seven or eight months' winter, with the thermometer frequently as low as -40° Fahr. Mr. Walter Haydon, just returned from five and a half years' service there, has favored me with the following table of causes of death from 1811 to June, 1882. It illustrates both the scanty population of the north, and the extreme difficulty of getting facts even under apparently favorable circumstances, for the register, though an efficient one, is, he says, imperfect and badly kept. Of one hundred and sixty-two entries of the cause of death, an average of a little over 2.4 a year:

68	were due to consumption.
22	" " old age.
16	" " cold and starvation.
14	" " whooping-cough.
7	" " bronchitis.
6	" " teething.
15	" " paralysis, epileptic fits, peritonitis—5 each.
3	" " gastric fever.
2	" " influenza.
6	" " apoplexy, hydrocephalus, hemiplegic, strangulated hernia, cronp, heart-disease—1 each.

3 were infants under two days old.

It is interesting to observe the presence of some members, of the class of "specific febrile diseases" dependent upon morbid poisons, and the absence of others, *e. g.*, small-pox, typhus, and scarlet fever. Mr. Haydon further told me that, during his stay there, he used nine different consignments of vaccine lymph, all without success. This he was disposed to attribute to their having all reached him during the winter, and thus been exposed to intense cold for some weeks.

Of the cases of phthisis which he himself observed, all occurred,

among the native Indians or half-breed, and their symptoms were the same as among ourselves—cough, hæmoptysis, night-sweats, diarrhœa, in chronic cases “clubbed nails.” The duration varied also from a few months to years. Syphilis and gonorrhœa are unknown among the natives. The greatest possible care is taken to prevent their introduction; and as the ship which brings supplies visits the station only once a year, or, not unfrequently, in consequence of the ice, only once in two years, this care is effectual. The lung-disease, therefore, which causes such large mortality among the natives, is not syphilitic phthisis.

Here, then, is an Arctic climate where the percentage of phthisis in the general death-rate is enormous, and where it seems almost exclusively among the natives. On the other hand, there are tropical countries where phthisis is all but unknown among the natives. This is the case in Senegambia and on the Gold Coast within 8 degrees of the Equator. A fellow student of my own, Dr. Thomas Jones, of Mansfield, spent five years on the Gold Coast. He tells me that among 4,000 cases of sickness annually, he never saw a single case of phthisis in a native. It is, however, of frequent occurrence among the West Indian soldiers stationed there, and there families; although in their own country they are said to possess an almost complete immunity from it. I wish to draw your special attention to this and similar exceptions to the general statements which have been made, as to the conditions which favor or arrest the spread of phthisis; for I believe that these exceptions furnish a most useful clue to the nature of the disease.

* * * * * *

Whatever may be the relation between dampness of the soil and phthisis, it is certainly one which may be overpowered or masked by other forces.

Of the three conditions so far considered, two—viz., altitude and soil-dampness—have, undoubtedly, great influence; the first in preventing, the second in developing phthisis; and, in both, the facts indicate that there is a something, in large measure independent alike of the constitution and social habits of the population subject to it, but without which phthisis cannot exist. It is certainly improbable that altitude acts by producing, sooner or later, a race of men which is proof, or all but proof, against certain morbid conditions. For, on the one hand, natives of the hills readily contract phthisis in the

lowlands; and, on the other hand, the lowlanders recover when removed to the hills. The antiphthical constitution, if it be in any way due to altitude, must be a very temporary affair, easily acquired and easily lost; and yet there is no *a priori* improbability against the formation of such an antiphthical constitution, or against its acquiring a permanent character. Indeed, we know that there are races which remain comparatively unharmed by phthisis in the midst of deeply infected localities, *e. g.*, the Chinese in Melbourne.

Since, then, at a certain height above the sea, phthisis ceases to occur, and affected cases recover without affecting injuriously their friends and neighbors, whilst there is no reason to suppose that these latter possess any special protection against phthisis, other than what may be temporarily due to residence at a certain altitude, it is surely reasonable to suggest that the cause of this immunity is to be found in the supposition that some external agent, essential for the development of phthisis, is here inert or absent. In the case of soil-dampness the probability of the existence of some such agent is even greater. It is difficult to understand in what way the drying of the soil, by the execution of sewerage-works, could have so profoundly and so rapidly altered the constitution, occupation, habits, and vitality of the people of Salisbury for example, and of other towns, as at once to reduce, by a very large percentage, the number of cases of a developmental disease, if phthisis be recognized as developmental, or of a directly contagious disease, if it be recognized as directly contagious. Surely here, too, as in the case of altitude, a reasonable, perhaps the best, explanation of the facts is that phthisis is produced by some external agent, but yet, not spread in the ordinary course of things by direct contagion. The evidence from the effect of climate pointing in the same direction is less strong, for the affirmative facts are less certain and less striking. The exception, however, under all three heads, climate, altitude, and soil-dampness, permits even a stronger proof than can be drawn from the general laws to which they are related. It is, I believe, all but impossible to explain these exceptions on either the developmental theory or on that of direct contagion; but this will be treated of in greater detail in the final summing up of the conclusion to be drawn from the nature of the so-called causes of

phthisis. At present, I would only add that these three conditions are, in themselves, entirely independent of any human agency; that, so far as man's action modifies the unwholesome influence of any one of them, it will be to minimize it by the use of suitable clothing, food, fire, and shelter, and that therefore, their real power, as gauged by statistics, is probably under rather than over stated—*British Medical Journal*.

[*To be Continued*].

RECENT TESTS FOR ALBUMEN.

In a recent discussion on albuminuria by the Glasgow Pathological and Clinical Society (*Glasgow Medical Journal*, March, 1884), Dr. William Roberts, of Manchester, said of the tests recently suggested that they possess extreme sensitiveness, but that they all have the serious drawback of frequently giving a reaction with normal urine. With urines that contain a large or moderate amount of albumen, the reaction is quite unmistakable; but with such as contain but a small quantity, or only traces of albumen, their reactions require to be controlled by heat and nitric acid before they can be accepted as conclusive. He further found that the old tests—heat and nitric acid—but especially the heat test, when performed with certain precautions, present a delicacy, a certainty of action, and freedom from fallacy which render them distinctly superior to any of the new tests.

Serum albumen and globulin, the two known morbid albumens in the urine, are what we seek to recognize. This being the case, says Dr. Roberts, any test which requires strong acidulation with an organic acid is open to the objection that it precipitates mucin, the essential constituent of mucus, which appears to be present in larger or smaller quantity in all urines. This fact, he says, throws out the tungstate, mercuric iodide, and the ferrocyanide of potassium.

The best test for mucin, according to Dr. Roberts, is concentrated solution of citric acid, which should be used as nitric acid by Heller's method. When a solution of citric acid is thus overlaid with urine,

an opalescent zone makes its appearance between the two. Acetic and lactic acids are less suitable, because too light to sink to the bottom of the tube; but acetic acid, if mixed with one-third its bulk of glycerine, acquires a density sufficient for the purpose.

The *heat test* for albumen is performed by Dr. Roberts as follows: Ten cubic centimetres, or three fluid drachms, of urine are placed in a long test tube, so that it will form a column of two or three inches. To this is added a single drop of acetic acid. The upper half of the column is then heated to brisk boiling. If albumen is present, even in minimal quantity, the upper boiled portion of the column will show opalescence, in contrast with the lower half, which remains unchanged. If the urine be alkaline, it should be carefully neutralized by adding successive drops of acetic acid until litmus paper shows a faint acidity, and then the final single-drop of acid is added before boiling.

Even if the urine possess its natural acidity, and be turbid from lithates—which, of course, should be filtered off or allowed to subside—it is better to add a drop of acid if it is to be desired to bring out the maximum sensitiveness of the boiling test. By using this small and definite quantity of acid the mucin reaction is avoided, as well as the risk of preventing the precipitation by the use of too much acid. In this manner, Dr. Roberts says, albumen may be detected in a watery solution which contains only part in 250,000! Surely we need no more delicate test than this.

He does not tell us, however, how to avoid the errors which may arise where comparatively large amounts of albumen are present, but where, in consequence of its previous combination with an acid or alkali, there is formed an acid-albumen or an alkali-albumen, neither of which is precipitable by heat. This error can only be thoroughly guarded against by using nitric acid, according to Heller's method, or, better, Dr. Robert's own acid-salt solution.

With regard to the nitric acid test, Dr. Roberts says that it is necessary to wait thirty or forty minutes before the utmost delicacy of the test is exhausted, and that the faint hazy zone, which is only fully developed at the end of thirty minutes after the addition of the acid, is just as certain a sign of the presence of albumen as a zone that develops immediately, or after the lapse of one minute.

We confess this method of securing delicacy by the acid test is new to us. We had supposed that to wait beyond a minute or two for the development of the white zone was fatal to the value of the test; for

it is at this time that the cloudy belt of acid urates makes its appearance, while any one who has had much experience with Heller's test knows that when a small quantity of albumen is present it is soon dissolved by the excess of nitric acid, even where a decided zone appears at the junction of the two fluids.

In fact, while we agree entirely with Dr. Roberts as to the delicacy of the heat-test, we consider the nitric acid test far from delicate, although it or the acid-salt solution is still necessary to check the heat test where considerable albumen is present but is not precipitable by heat.

Dr. Roberts also calls attention to a globulin reaction, to which attention has not heretofore been directed. It is based on the fact that this substance, which almost always accompanies serum albumen in urine, is held in solution by sodium chloride and other neutral salts always present. But when such urines are largely diluted with ordinarily pure water, the percentage of neutral salts is so reduced that the globulin falls out of solution and forms a cloudy precipitate. The test is thus applied. Fill a urine-glass or test-tube with water, and let fall into it a succession of drops of albuminous urine. In many cases each drop, as it sinks, is followed by a milky train, and when a sufficient number of drops have been added, the water assumes throughout an opalescent appearance, as if a few drops of milk had been added to it. The addition of a little acetic acid causes the opalescence to disappear. This reaction, says Dr. Roberts, appears to be due to globulin, or, rather, paraglobulin.

It is certainly an interesting chemical experiment thus to determine the presence of globulin in an albuminous urine, but as it neither adds to nor detracts from the pathological significance of an albuminous urine, the busy practitioner is scarcely likely to make much use of this test at present.

In a very interesting communication to *L'Union Medicale*, No. 34, March 6, 1884, M. Charles Tanret, the discoverer of the iodide of mercury and potassium test, replies to the objections which have been made against it in common with several of the recently suggested tests for albumen, on the ground that peptones and certain vegetable alkaloids especially quinine, are similarly precipitated by it.

In the first place, he gives the correct formula, which he says has been erroneously quoted by Dr. Tyson in his note read before the

Philadelphia County Medical Society some weeks ago. It should be as follows: bichloride of mercury, 1.35 grammes; iodide of potassium, 3.32 grammes; acetic acid, 20 cubic centimetres; distilled water enough to make 100 cubic centimetres. The resulting reagent is the double iodide of mercury and potassium, the chloride of potassium being without effect.

This fluid does not require the previous acidulation of the urine to be tested. It is to be noted that the precipitate is resolvable in an excess of albumen, but this source of error is obviated by adding an excess of the reagent. The reagent should be added as long as the cloud increases, and when the precipitation of the albumen is complete, its resolution is possible.

As to the precipitation of peptones and alkaloids, M. Tanret says this source of error may be avoided by simply warming the tube, or adding a little alcohol, by both of which measures these substances are redissolved, while a cloud due to albumen is permanent. On recooling the warmed tube the cloudiness, originally produced by peptones and alkaloids, returns.

As to the delicacy of the test, Tanret's original experiments proved that it would show one part of albumen in 2000 of water, but if the test fluid is overlaid by urine, its delicacy is increased ten fold, a beautiful white disk being formed at the intersection of the two liquids.

The advantage of this test over the picric acid, which is at once equally delicate and liable to the same objections, is found in its perfect colorlessness, and the consequent more striking contrast it affords to the urine with which it may be overlaid.—*Philadelphia Medical News*.



DISMAL SWAMP BOTANY.—Gerald McCarthy, Washington, D. C., says that the flora of Dismal Swamp is rather tame and monotonous, but thinks if it were possible to penetrate into the remoter fastnesses many new names would doubtless be added to systematic botany. He found a short distance from Elizabeth City a thrifty colony of *Rosa bracteata*, which has not heretofore been found north of Mobile.—*American Naturalist*.

THE DOCTRINE OF EVOLUTION AS APPLIED TO PATHOLOGICAL STATES OF THE NERVOUS SYSTEM.

In Dr. Hughlings Jackson the Spencerian philosophy has found a strong supporter. The recent Croonian lectures on the Evolution and Dissolution Nervous System are a rigid application of Mr. Spencer's principles to the explanation of nervous pathology.

The nervous system in its development is a striking illustration of the general law of evolution, which it is sought to apply to all orders of natural phenomena. This is seen whether we study the nervous system as an ascending development in the animal kingdom, or in the light of human embryology. It is an advance from the simple to the complex, from the relatively undifferentiated to the relatively differentiated, or as Hughlings Jackson expresses it in the lectures above alluded to, from the most to the least organized—that is to say, from the lowest well organized centres up to the highest least organized centres, the latter being the most complex, the most heterogeneous, and the most unstable. The triple conclusion, then, to which Jackson arrives is, “that the highest centres which are the climax of nervous evolution and which make up the organ of mind are the least organized, the most complex, and the most voluntary.”

One of the most interesting chapters in Dr. Maudsley's recent work, *Body and Will*, treats of the future probable disintegration and decline of will power in the human race by a reversal of the solar conditions which have evolved it. Without, however, speculating as to any such possible contingences, we are continually meeting instances of disintegrations in the delicate nervous plexuses which form the substratum of mind by causes which produce local failures of nutrition. Dissolution is treated of by Dr. Jackson as a process of *undevelopment*, a “taking to pieces” in the order from the least organized, the most complex, and the most voluntary toward the most organized, the most simple, and most automatic. Such “dissolution” (which of course is only partial) is equivalent to the statement, “reduced to a lower level of evolution.” Dr. Jackson applies this thought to the elucidation of the phenomena of insanity; “Starting with health, the assertion is that each person's normal thought and conduct are or signify survivals of the fittest states of what we may call the topmost layer of his highest centres, the normal highest level of evolution—the topmost layer—is rendered

functionless. This is the dissolution, to which answer the negative symptoms of the patient's insanity. His positive mental symptoms are still the survival of his fittest states,—are survivals on the lower but then highest level of evolution. The most extravagant actions and the most absurd mentation in insane people are the survival of their fittest states. We need not then wonder that an insane person believes in what we call his illusions, they are his perceptions. His illusions are not caused by disease, but are the outcome of activity of what is left of him; his illusions are his mind."

The above view of abnormal mental action—as being a result of suspension or inhibition of the supreme centres and the unchecked activity of the lower—is now a favorite view with mental pathologists.

Dr. Jackson gives interesting illustrations of his meaning, of which one of the simplest is the effect of alcohol on the brain (and here we take occasion to remark that a similar conception was presented by John Fiske in a work published fifteen years ago): "An injurious agency, say alcohol, taken into the system flows to all parts of it, but the highest centres being least organized 'give out' first and most, the middle centres being more organized resist longer, and the lowest centres being most organized resist longest. Did not the lowest centres for respiration and circulation resist more than the highest do death by alcohol would be a very common occurrence."

After stating that in the progress of chronic alcoholism gradual involvement of the lower centres takes place, he speaks of local dissolution. Disease may occur in any evolutionary level on one side or on both sides; it may affect the sensory elements chiefly, or the motor elements chiefly. There are local dissolutions of the lowest centres and of the highest centres. In every case of insanity the highest centres are affected, and different divisions of these highest centres are affected, corresponding to different kinds and degrees of insanity.

As examples of local dissolution, Dr. Jackson cites first progressive muscular atrophy. This is dissolution commencing at the bottom of the central nervous system. Here atrophy begins in the most voluntary limb, the arm, affecting first the most voluntary part of the limb, the hand, and spreading to the trunk (the more automatic parts). The wasting of the muscles of the hand has its causal counterpart in atrophy of the first or second dorsal anterior horn, an atrophy which, as its name intimates, is progressive.

He next refers to hemiplegia from destruction of a plexus in mid region of the brain. The arm, the most voluntary limb, suffers the more and longer, and the most voluntary part of the face suffers more than the rest of the face. Although unilateral movements (the voluntary) are lost, the bilateral, which are more automatic, are retained. "Hemiplegia is a clear case of dissolution,—loss of the most voluntary movement of one side of the body, with persistence of the more automatic movements."

His next illustration is paralysis agitans. Here the tremor begins in the hand, affecting the whole arm, finally becoming bilateral. "In an advanced stage paralysis agitans is double hemiplegia with rigidity; is a two-sided dissolution." The same conception is applied to hemilateral epileptiform seizures and to chorea, the great elaborateness of whose movements "points to disease high up, to disease on a high level of evolution."

Dr. Jackson's next example is aphasia, which in many ways illustrates the doctrine of dissolution. In complete aphasia, for instance, there is loss of intellectual (the more voluntary) language. In other cases the patient has lost all speech with the exception of "yes" and "no," "the most automatic of all verbal utterances."

Speaking of uniform dissolution, dissolution affecting all divisions of the highest centres, Dr. Jackson chooses as an example delirium in acute non-cerebral disease. This, scientifically considered, he says is a case of insanity. "The patient's condition is partly negative and partly positive. Negatively he ceases to know that he is in the hospital, and ceases to recognize persons about him. In other words, he is lost to his surroundings; he is defectively conscious. We must not say that he does not know where he is because he is defectively conscious; his not knowing where he is is itself defect of consciousness. The negative mental state signifies, on the physical side, exhaustion or loss of function, somehow caused, of some highest nervous arrangements of the highest centres. We may conveniently say it shows loss of function of the topmost layer of his highest centres. The other half of his condition is positive. Besides his not knowings there are his wrong knowings. He imagines himself to be at home or at work and acts as far as practicable as if he were; ceasing to recognize his nurse as a nurse he takes her to be his wife. This, the positive part of his condition, shows activity of the second layer of his highest centres, but which, now that the normal topmost

layer is out of function, is the then highest layer. His delirium is the 'survival of the fittest' states on his then highest evolutionary level. Plainly he is reduced to a more automatic condition. Being (negatively) lost from loss of function of the highest, latest developed, and least organized, to his present 'real' surroundings, he (positively) talks and acts as if adjusted to some former 'ideal' surroundings, necessarily the more organized."

These lectures will be read with interest by all who desire to investigate the great questions of neuro-psychology.—*Boston Medical and Surgical Journal*.



ETHERIZATION BY THE RECTUM.

Dr. Abner Post reported three cases of etherization by the rectum, in the Boston City Hospital. The ether was given from a small bottle with a perforated cork to which is attached a rubber tube, to the other end of which is attached a catheter. The bottle of ether is placed in a vessel of warm water, and the catheter passed into the rectum. The ether is seen to boil in the bottle, and its vapor is conveyed through the tube into the bowel. The hot water used was drawn from the hot water pipes, and was so hot as to be uncomfortable to the hands. After describing the effects in several cases the reporter concludes: "So far as it is possible to draw conclusions from present experience, etherization by the rectum differs from inhalation principally by the absence, or rather the diminution of the stage of excitement. The unpleasant after effects seem less marked. Vomiting, if it occurs at all, is slight. The constitutional effects are the same. The use of a much smaller quantity is sufficient to induce anesthesia.—*Boston Medical and Surgical Journal*.


MR. PETER SQUIRE, the eminent pharmaceutical chemist, of London, recently died at the advanced age of 85 years. The names of Squire in England, and Squibb in America, will forever hold the most prominent places among physicians and pharmacists. The death of Mr. Squire is a great loss.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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MEETING OF THE AMERICAN MEDICAL ASSOCIATION
IN WASHINGTON—THE ASSOCIATION OF MEDICAL
EDITORS—MEDICAL EDUCATION, AND THE REGULA-
TION OF THE PRACTICE OF MEDICINE—PUBLIC
HEALTH AND THE PREVENTION OF PESTILENTIAL
DISEASES—THE SECTIONS—THE PERSONNEL OF THE
ASSOCIATION.

The Association of the Medical Editors, according to custom met on Monday, the day preceding the meeting of the Association. There were in attendance, the representatives of about sixteen medical journals. Dr. Connor, editor of the *Detroit Lancet*, the President of the Association, was present, and later in the evening, the Secretary, Dr. Shoemaker, of the *Medical Bulletin*, came in. The Association seems to be simply an organization for the promotion of friendly intercourse between the gentlemen engaged in journalistic medicine, and also for the discussion of such questions as come within the range of their work. Dr. Connor read his address

upon the "Medical Journals of the Future as indicated by Medical Journals of the Past."

It was a prodigious work to bring together all the items about the birth, life, and death, of medical journals, as numerous as they have been in this country. The first journal was published in New York, and was a translation of a French journal. He analyzed most carefully the motives which kept so much journals alive, and which, too, favored the early demise of so many. His standard, as reflected so well in the pages of his own journal, is a high one, and his bill of particulars of the acquirements of a medical editor, must set his thoughtful hearers to thinking how far they come short of this standard.

Dr. Connor conducts one of the best medical monthlies in the country, and we were glad to notice how apparently vigorous his health is, and what a promise of a brilliant and useful career he has before him.

The general discussion of the Association of Editors was upon the question "*How far can Medical Legislation influence Medical Education.*" Dr. N. S. Davis, editor of the *Association Journal*, opened the discussion. If he had had the North Carolina Board of Examiners in his mind, he could not have set forth more completely the work of that body, in drawing a theoretical scheme of what a Board of Medical Examiners should be. The other speakers, could not treat this other than as a theoretical matter, for without an exception, it seemed not to be known, that in North Carolina the experiment of a Board of Examiners independent of the Board of Health, independent as to the written guarantee of a diploma in the possession of an applicant, had been growing in efficiency in this State for twenty years.

That 1200 physicians, a large proportion of whom are busy practitioners, should come together to transact business looking to the advancement of the profession, and to hear and be heard on the scientific part of their work, and at an expense probably not short of sixty-thousand dollars exclusive of the loss of income by absence from home, shows how deeply in earnest they are. The motives which impel individuals to incur all this expense and loss of time are various, and easy to be understood in a large number of cases; but notwithstanding the fact that a considerable number of members are evidently not satisfied with themselves without they

are on the floor of the general meeting, speaking to all the various questions of association business, introducing resolutions and the like, and in the sections speaking with assurance and equally well upon the various branches of medicine, by far the larger number of them only speak in the meetings to answer to their names. Indeed the members could be classified as follows :

The parliamentarian and resolution maker; the hornblower with the sonorous voice putting in his little buncombe speech as chance permits; the medical politician who may be seen at the hotels, and in the lobby, "laying pipes" for the distribution of offices ; the diligent hard working men whose energy is intently bent upon making the scientific and literary outcome of the work creditable; the passive members, who good naturedly sit hour by hour to hear any thing that may be said, sufficiently gratified if they can only hear the name of the speaker; the pleasure-seeking member who goes to the meeting to get away from hard work at home, is in his element when he can come across his old friends and see the sights. There is one class left out of this enumeration, however, which must not be overlooked, and that is the group of patriarchs, composed chiefly of ex-presidents. These gentlemen are ever on the alert, watching for the resolution-maker, lest he should slip in a damaging and disorganizing motion. This analysis may not be entirely accurate, but it will answer our purpose.

The meeting was organized promptly on Tuesday, Dr. Austin Flint, the President in the chair. Although apparently in vigorous health, it soon became apparent that either the Congregational Church was faulty in acoustic construction, or the speaker's voice was too feeble to fill it. This small matter marred the smoothness of the sessions, for coupled with it was the lack of parliamentary knowledge and tact, on the part of the speaker.

Dr. Garnett, the chairman of the local committee of arrangements had his work thoroughly in hand, and from first to last, with the assistance of the other members of the committee, all the numerous details, both for the conduct of business meetings and the social entertainments, went smoothly along, as though it had been the occupation of their lives.

The address of the President, as he warmed to his subject, was audible and in some parts very spirited. It presented all of the questions of the day on the absorbing subjects of ethics and educa-

tion, giving no uncertain sound as to the position of the speaker on the former topic, but touching very delicately the question of the licensing, as independent of the teaching bodies. The chief point which Dr. Flint made against the state examination of candidates was on the ground of the impracticability of securing uniformity in the different States of the Union, and because it, as he thinks, contravenes the principle of self-reliance in matters relating to our profession. We can only state in this connection that the amount of experience already gained in this country upon this topic, scarcely lead others than the professors in some colleges to such conclusions.

The *Medical Record* says, we believe with justice: "It is hardly safe, in these days to ignore the utility of State examinations for a degree, especially on such grounds as taken by the orator. The objections urged are not only utterly untenable, but add force to the advocacy of a measure in which every one not connected with a medical school has implicit faith."

The announcement of the serious condition of Prof. S. D. Gross caused a marked sympathy throughout the vast assemblage. A resolution was sent, but too late, to greet the ears of the dying surgeon. As soon as the announcement of his death came, the Surgical Section adjourned, as a mark of respect.

How harshly the announcement of the the cremation of his body fell upon the ears of his hosts of friends, will be easily understood by those who regard cremation as unnatural and opposed to the better instincts of our fallen nature!

In general session of the second day resolutions were made in respect to the memory of the lamented Gross, and the *Journal of the Association* directed to be put in mourning in the next issue containing them.

A resolution which was introduced by Dr. J. F. Hibberd, of Indianapolis, before the section on State Medicine at its session on the first day, met with a singular fate. The resolution was to the effect that it was deemed advisable in every State to have Boards of Examiners, independent of the Colleges, and that there should be devised a standard of uniformity in all the branches of medicine, *except materia medica, therapeutics and practice*. After much discussion, a resolution was passed by a vote of 14 to 16, to present the suggestion to the general meeting. It was a pity that such a jejune suggestion should have gone to the Society. As soon as it was evident that it had pro-

voked hostility, not because it was a very weak suggestion, but because it was too strong. The President was particularly indiscreet in pronouncing the resolution out of order, as though it contained element, of discord which the Society should not be threatened with. Dr. M. H. Henry, of New York, with the courage of a man who knew the rights of the body of the profession in the premises, defended the resolutions and showed the disposition of medical colleges of the country to smother educational reform every time it was brought up in this shape. Dr. Henry deserves the thanks of the profession of the country for this just rebuke to those who plead for a higher education, but battle against every measure looking to its accomplishment.

The report of the Board of Trustees of the *Association Journal* was read, and also a report by its editor, Dr. N. S. Davis. At its conclusion, Dr. J. H. Packard read a minority report on the same subject, declaring that in his opinion "the *Journal* had not approached anywhere near the standard to which the organ of the Association should attain. The defects of the *Journal* are not those consequent on a new enterprise, and are not decreasing." There seemed to be some surprise that there was a minority report, although the topic of conversation among a large number of members quite plainly foreshadowed some dissatisfaction as to the conduct of the *Journal*. A motion was made to table Dr. Packard's resolution, and so prevent any discussion of the reasons which lead Dr. P. to his conclusions. It was well known that Dr. P. was the most active promoter of the scheme of an *Association Journal*, and the friends of the enterprise were anxious to hear all about it. Parliamentary tactics were resorted to to table incontinently the report of Dr. Packard, and after some difficulty the yeas and nays were allowed to be called. This resulted in the defeat of the minority report, but in a gain of opinion in favor of Dr. Packard. It was an open secret that there was an attempt to get the *Journal* removed to an eastern city, and singularly enough some of the friends of the present management construed the negative votes of members as indicating a leaning in this direction, but this was merely the suggestion of an over-sensitive majority. The discussion will do the *Journal* good. There was very nearly a uniform opinion about the condition and standing this periodical should occupy, and a firm faith in its future as a worthy scientific and literary representative of the American profession.

The *State Medical Section* was attended less numerously than any other except that of Diseases of Children. Much important work

originates in this section—in fact, nearly all of those measures which require State and national legislation are begun here. There was one paper presented by Dr. Von Klein, of Ohio, on the *Hygienics of the Talmud*, although not suited to an audience of ladies and gentlemen, even though they were all physicians, which will be read with interest. We often hear public speakers allude to the sanitary practices of the Israelites, but we seldom have the opportunity to listen to so many consecutive principles as this speaker brought together from the wilderness of the Talmud.

As most of the Secretaries of State Boards of Health were present at the meeting of this section, advantage was taken of the opportunity to organize a plan for the annual conference of these officers. It was understood that a separate place of meeting would be set apart for this body during the meetings of the American Public Health Association, and also a day or a session for the full and free informal discussions of such topics as appertain to the details of their work. This is considered the most substantial advance that State medicine has made in some time. All honor to the small group of faithful sanitarians who year by year sacrifice their time, denying themselves the instruction of the sections on the department of medicine by which their support is obtained, in order to work out the unremunerative problems of sanitary reform!

The address of the Chairman of the *Section on State Medicine*, Dr. D. J. Roberts, was devoted to a consideration of medical education and national sanitation. Dr. Roberts exhibited much warmth of manner and a facile declamation, but he had evidently not viewed his subject with the fairness of mind attainable by thinkers not connected with medical colleges. He asserted with the assurance of one who had carefully studied the question, that in those States which had laws regulating medical education, the profession stood no higher than elsewhere. If the speaker had extended his enquiries due east from the city where he lives to the regions of his mother Carolina, he would have heard something to overwhelmingly contradict him. (Query. Is it necessary for one to descend the professorial chair to recognize the loudly augmenting demand of the profession and of the people for a higher education?)

The *Section on Practice of Medicine* was the most numerous attended. Especially did the consideration of *Tuberculosis* attract an interested audience. One would hardly be able to imagine a more

unequal quality of work than was here exhibited. One of the speakers by previous invitation, with weeks to prepare his argument, spoke confidently of the *animalcules* of tuberculous matter, as flippantly as though it was a well settled fact that *bacilli* are of the animal kingdom. The remarks of Dr. Formad, Dr. Welch, Dr. Ernst and Dr. William Pepper, gave evidences of the best perfected knowledge, but *unproven* still stands written against the theory of the causative relation of bacilli to phthisis.

That the appearance of these micro-organisms is uppermost in the thoughts of the doctors, was evidenced by the eagerness with which they crowded around the microscopes at the Army Museum, and the Naval Museum of Hygiene, where they were on exhibition. Even in Congress, we caught a few paragraphs from a Southern Senator on some sanitary subject, and he, too, was trying to call the attention of a well-dressed, but rather unappreciative audience of senators, to the latest discoveries in bacilli and bacteria. The lay and professional mind seemed to be stirred to a very great degree on this subject, and every paper into which a fragment of germ theory can be introduced, seems to invest its author with unusual scientific authority.

We were not present at the discussion on *Epilepsy* before the Section on the *Practice of Medicine*, but we heard that the paper read by Dr. Eugene Grissom, on that subject, spoken of with high commendation.

Of the *personnel* of this vast assemblage of men, we can say truthfully that it compared favorably with the more select ones we have visited. It was quite noticeable to follow around with the eye a circle of seats, the great preponderance of men past the meridian of life.

It was pretty generally believed that the President of the Association would be a Southern man, and so it turned out. The Nominating Committee reported the name of Dr. Henry F. Campbell, of Augusta, Ga., a name illustrious in Southern medicine. The newly chosen President, if we judge by some of the landmarks time has made for him, must be about sixty years of age; but he does not look five years older than when with affable smile, and fatherly solicitude, he plied poor Confederate candidates for commissions, with tough questions on the practice of medicine. Dr. Campbell's physiological contributions were contemporaneous with those of

Marshall Hall. His pen has been most prolific and versatile. Hardly a department of medicine or surgery has not been laid under contribution to him for work done by him, and to-day he appears to be as full of future possibilities in these directions as ever. We are satisfied that the Association has done wisely in its choice.

Our delegation did not carry off any of the honors on this occasion, and even the name of our friend the eminent Dr. Charles J. O'Hagan, as member of the Nominating Committee was so much mutilated by the reporter, as hardly to be recognized. The *New York Medical Record* gave it as "C. G. O'Hagener," but most of the journals did worse than this.

The meeting as a whole was highly satisfactory, and it was again shown that this body has its foundation deep in the hearts of the profession, and is destined to achieve perpetual good to the cause of medicine.

The next session will be held in New Orleans in 1885.



NEW TEST FOR PEPTONES.—Since some of the most delicate tests for albumen are rendered of doubtful value because they also produce reactions with peptones, the recent announcement to the Academy of Natural Sciences of Philadelphia, by Dr. N. Archer Randolph, of a new test for peptones is of great importance. It is based upon the fact that if the acid nitrate of mercury, Millon's reagent, be added to a cold aqueous solution of potassic iodide, a red precipitate of mercuric iodide always appears. If, however, either the peptones or biliary salts be present, the precipitate of nascent mercuric iodide assumes a yellow color.

In order to render the test sensitive to minute quantities of the substances in question, it is necessary to limit the quantity of potassic iodide employed. To each five cubic centimetres of the suspected fluid, which must be cold, and neutral or faintly acid, two drops of a saturated solution of the reagent should be added, thoroughly mixing the whole. Now if four or five drops of Millon's reagent be added, and peptones or biliary salts be present, the yellow color appears. The question as to the presence of biliary salts is easily eliminated.

By this test, Dr. Randolph has been able to detect peptones in the proportion of 1 to 17,000 parts of water.—*Philadelphia Med. News.*

REVIEWS AND BOOK NOTICES.

SHAKSPEARE AS A PHYSICIAN. Comprising every word which in any way relates to Medicine, Surgery, or Obstetrics, found in the Complete Works of that Writer, with Criticisms and Comparison of the same with the Medical Thoughts of To-day. J. H. Chambers & Co., Chicago, St. Louis and Atlanta. 1884. Pp. 226.

The wonderful genius of Shakspeare is still to furnish the material of more books. Not long ago we heard of "Shakspeare as a Lawyer," now we are treated to a volume showing us what he knew about medicine.

Well, the book is worth reading, not because it gives one much of an insight into the state of medical practice in that day, but because it gives us another view of the many-sided ability of the great dramatist.

No analysis of human nature would be complete that did not detect the inground superstition which has infested the race from all time, more especially the easy credulity of the multitude about wonderful cures. This phase of the subject Dr. Chesney has especially well brought out, and a pitiful sight, it is in the hands of the dramatist. The scene taken from "Henry the Sixth" detailing the doings of an imposter (p. 204) is a suitable commentary upon the credulity of the people in the cures of mountebanks at this day. It shows how thoroughly Shakspeare had fathomed the inherent weakness even of a blind man, who, under the influence of a bold imposter who plies his nostrums at the same time instilling flattering words into his victim's ear, excites him to such a degree that he persuades himself that really he can see a little.

The author's commentary upon selected passages are many times quite wide of the mark, especially in some of his comparisons of the past with the present; but many of his comparisons of descriptions of phenomena are ingeniously compared with what we know to take place under the influence of modern drugs. It is almost a pity that some of the passages do not admit of the interpretation the author invents for them.

We say to all our friends who get a vacation in the summer, get a copy of "Shakspeare as a Physician," to take with you in your ramble, and you will have entertainment enough for one season.

DRUGS AND MEDICINES OF NORTH AMERICA. A Quarterly devoted to the Historical and Scientific Discussion of Botany, Pharmacy, Chemistry and Therapeutics, their Constituents, Products and Sophistications. J. W. LLOYD, Commercial History, Chemistry and Pharmacy. C. G. LLOYD, Botany and Botanical History, 180 Elm Street, Cincinnati. 1884. Price \$1.00 per annum.

Medical botanies have never paid in this country, but judging by the eagerness with which such works as Rafinesque's and Bigelow's and Barton's belonging to a past generation are bought, almost before the ink with which the catalogue announcing them has had time to dry, there must just now be a revival of interest in the study of medicinal plants.

This venture of the Messrs. Lloyd, we believe, is issued opportunely. It has the advantage of being beautifully printed and well illustrated, and of being supplied at the small rate of twenty-five cents a number.

The authors have not confined themselves to the medicinal plants of the U. S. Pharmacopœia, for, indeed, in the first number now before us, neither of them is official. The enumeration of plants begins with the Nat. Ord. *Ranunculaceæ*, genus *Clematis*.

This genus is very thoroughly studied, and all that can be said of the different species therapeutically has been brought together from various sources, some of the books cited not easily accessible. The first *plate*, is a wood-cut illustration of the natural size of *Clematis Virginiana*; the next is a figure *Clematis crispa* (Blue jessamin, Rice-field jessamin, Blue bell) and it is unusually faithful to nature.

The genus *Thalictrum* and *Anemone* have each an illustration, representing, in full size *T. anemonoides* and *A. patens* var. *Nuttalliana*. All of these illustrations are good enough to enable even a beginner to recognize the living plants.

The work is evidently prepared for the medical man of all "schools," as special therapeutical paragraphs on the Homœopathic uses of medicines are prepared by special writers. This department of the work will be the least important of all, and is no doubt necessary to popularize it in some sections of the country.

To our readers who desire to acquire knowledge of medical botany, we do not know of a single work for ten times the cost that would

answer the purpose designed in this serial. We would suggest to all interested that they could not do better than to begin with the first quarterly part, just issued, and in this way master the entire work by easy installments.

A MANUAL OF PSYCHOLOGICAL MEDICINE AND ALLIED NERVOUS DISORDERS. Containing the description, Etiology, Diagnosis, Pathology and Treatment of Insanity, with especial reference to the clinical features of Mental Diseases, and the Allied Neuroses, and its Medico-legal aspects, with a carefully prepared digest of the Lunacy Laws in the various States relating to the Care, Custody and Responsibility of the Insane. Designed for the general practitioner of medicine. By EDWARD C. MANN, M.D. With Phototype plates and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1883; Pp. 699.

This volume is too large to be a manual, as may be judged by the title page we have given in full. It comes into the field well occupied by other works on the same subject, and must come as a competitor for scientific and literary honors.

The first part of the volume is devoted to a general consideration of insanity, with its history and classification. This is further elucidated by chapters on its etiology and early recognition, its prevention, its diagnosis and prognosis. Civil incapacity, legal tests of responsibility, hints for giving testimony, expert testimony, and the functions of experts in insanity, are treated in a separate chapter. This is followed by a consideration of the general paralysis of the insane, idiocy, dementia and folie raisonnée. There are three chapters devoted to the histology, physiology and pathology of the brain, with cases of the latter in illustration, and a separate chapter on the treatment of insanity.

The second division of the work considers the functions of the nervous system, with observations on modern nervous diseases. In this division dipsomania, hysteria, epilepsy, hystero-epilepsy, chorea, vertigo, cerebral and spinal anemia, inflammatory diseases of the brain, neuralgia and locomotor ataxia are treated, covering a space of more than three hundred pages.

The volume is, therefore, one on insanity and diseases of the nervous system, and as a book of reference for the general practitioner is highly to be commended. Judging by our examination during the few weeks

it has been on our table, although it is hardly correct to name such a volume a manual, it is, as a book of reference on particular topics, a very satisfying volume.

POST-NASAL CATARRH AND DISEASES OF THE NOSE CAUSING DEAFNESS. By EDWARD WOAKES, M.D., Senior Aural Surgeon, and Lecturer on Diseases of the Ear London Hospital. Illustrated with Wood Engravings. Philadelphia: P. Blakiston, Son & Co., 1884.

Out of the large number of special works on Catarrh, there is none for which we have such an unqualified good opinion as for this little work. The subject is clearly presented, in such language as to convince the reader that the author is not a one-sided specialist.

The chapter on taking cold is a very ingenious theory, and is strong enough as a peg to hang other theories upon, while it may not thoroughly satisfy.

The author uses the example of a common cold in the head to illustrate the general type of catarrhal inflammation, because the region affected is more or less easy of observation and it thereby affords an opportunity to study the phenomena of this disease.

The line of treatment suggested is rational, demonstrating to the general practitioner the fact, that all treatment for catarrh, to be successful, must be founded upon a due consideration of minute details.

A NEW DEFINITION OF INSANITY.—A few weeks since a disconsolate citizen called at our office for advice about his wife, saying that she was crazy. Upon being asked how he knew she was crazy and what are symptoms were, he promptly replied as follows: "Her head gets twisted up with ideas, and then she kind of gets mad at her own thoughts, and fights it out with somebody else." Who has done better?—*American Psychological Journal*.

DR. C. M. CALDWELL, of New York, uses a saturated alcoholic solution of menthol crystals, to which a little sulphuric ether has been added, in an ordinary hand spray, as a remedy for neuralgia with prompt relief.—*Maryland Medical Journal*.

CURRENT LITERATURE.

LUCILIA MACELLARIA (SCREW WORM) INFESTING MAN.

A farmer's wife, thirty-five years of age, was attacked on Monday, September 27, 1875, with a headache and a flushed face. She stayed at work, expecting a malarial chill, an affection prevailing at that time in the neighborhood. From this time the pains in the region of the frontal cavity, at the base of the nose and below the eye, extending to the right ear, increased. At times the pain was more severe than at others, but it never entirely left. This pain was described as preventing hearing and breathing, and so excruciating that at intervals, day and night, her cries could be heard at a great distance from the house. Tuesday evening bloody mucus began to run from the right nostril, which was somewhat swollen, the swelling extending on Tuesday over the whole right side of the face. On this day, the fifth of the complaint, four large maggots dropped out of the right nostril. When I was first called to the patient, Monday, October 4, only the right lip and nostril were swollen, the acrid discharge having somewhat blistered the lips below. After each discharge the maggots dropped from the nostril until the twelfth day; one hundred and forty or more maggots having escaped. The majority of the maggots were three-fourths of an inch in length, there being only a few which seemed a line or two shorter; they were of a yellow hue, conical shape, and having attached to one end two horn-like hooks. The patient recovered fully.

Monday, September 18, 1882, I saw a patient in the same neighborhood as the first, suffering from the same malady. At that time two hundred and eighty maggots had been discharged, and at the close of the illness, over three hundred. There was a swelling on each side of the nose, with a small opening to each. I lanced these openings, and more maggots came out.

In the Indian Territory the so-called screw-fly laid its eggs in the nose of man. In 1847 I heard of several deaths of men and children in Texas, near Dallas. The gad-fly was common in the American bottom forty years ago. It laid its eggs in the noses of cattle and in the ears of horses and deer, but never in the human nose. The fly that I send is about four times as large as the common fly. Head a dark, glistening green; a bronze face, very lively in appearance. Is it the same that they called in Texas or Indian Territory the screw-fly? or is it the gad-fly seeking a new field?

The patient of 1875 is now alive and well. The second case occurred two years ago, near Collinsville, in this county, and proved fatal. The third patient, above named, is getting well. The fourth is reported from Georgia; the patient died.

The first case which I had in my charge was the first which ever occurred here. The eggs must have been deposited in the nose several days before the fifth, the day the maggots dropped out. On the eleventh day all were discharged. I secured live maggots at that time, September 18, 1882. I put soil in an open-mouthed vial and dropped the maggots on it; they crawled in the ground in about five minutes. I covered the opening with white damastis, and hoped that the next year the fly would come out of the ground. But on October 6, or the twentieth day, the vial had fourteen living flies. So, reckoning from six days before the pain commenced for the laying of the eggs, to the twelfth day, when the maggot discharged, making eighteen days, and to this adding the twenty days from the time the fly laid the eggs until a new generation of flies is produced from them.

You may think I have dwelt too long on these cases; but if you had to stand at the bed and had seen the suffering and despair of the patients, and found that the worms were eating them up, you would not think so. All these cases occurred in the month of September.—*Fred. Humbert, M.D., F.C.S.*

[Upon this communication Dr. C. V. Riley says that the insect here referred to as attacking a human subject in Illinois, "is the *Lucilia macellaria* of Fabricius, the injuries of which to different animals are well known in the South and West, where the larva is called the 'screw-worm.' I have repeatedly endeavored to obtain the true parent of this worm. Dr. Humbert's communication is most interesting, but the specimens yet more so, as the flies he forwards are the first that have positively been bred from the larvæ known as 'screw-worms,' and they confirm the above determination of the species. The larvæ agree with others which I have from Texas, taken from the root of the ear of a hog which had been bitten by a dog."—*Proc. U. S. Nat. Mus. Sept. 1883, p. 103.* Compare also Professor F. S. Snow's article in *Psyche*, Mar., Ap., 1883, and S. W. Williston in *Psyche*, Nov., Dec., 1883.—*Eds. Naturalist.*

TOBACCO INQUIRY.

Notice was accidentally omitted from the April JOURNAL, in regard to the inquiry started by this JOURNAL on the effects of tobacco. So many replies have come in, that we thought it would give a more comprehensive idea of the opinion of our readers, to keep the matter open until further notice. We repeat the questions in our circular below :

INQUIRY INTO THE EFFECTS OF TOBACCO UPON THE HUMAN SYSTEM.

Dear Sir:—The question of tobacco addiction has been pretty thoroughly discussed as a moral question, but not sufficient pains have been taken to put on record the actual facts upon such a scientific basis as we, as physicians, endeavor to record the effects of the drugs we employ. Valuable items must have come to your knowledge either by your personal experience, or in your practice, and if you will be kind enough to respond to the subjoined questions or give your experience in your own way, you will confer a favor upon the subscriber. After all the replies are in they will be edited, and printed, either as a whole or in abstract, as the character of the replies may indicate. If you would rather reply anonymously, do so, but send your true name as a guarantee.

1. What harmful effects have you noticed to follow the prolonged addiction to tobacco ?

(a) As regards the Nervous System ?

(b) The Digestive System ?

(c) The Circulatory System ?

(d) The Sexual System ?

(e) The visual and auditory apparatus ?

2. What beneficial results have you observed to follow the use of tobacco ?

3. Have you observed any effects upon lying-in women, due to snuff addiction ?

Is persistent anemia more common among women thus addicted ?

Is menstruation impaired by it ?

4. Are patients addicted to tobacco in any form less susceptible to drugs, such as quinine ?

The above questions are stated as points which may suggest more important lines of thought. It is desirable to get a reply as early as the 1st of May, and as soon as the reports are all in and arranged, a printed copy will be sent to each reporter.

Very respectfully,

THOMAS F. WOOD,

Editor North Carolina Medical Journal.

CIDER AND ITS ANTI-CALCULOUS PROPERTIES.

A writer in the *Gaz. Med. de l'Algerie* calls attention to a recent publication by a pupil of Dr. Denis-Dumont, Surgeon-in-chief of the Hotel-Dieu, of Caen, which professes to demonstrate that cider is the enemy of stone in all the varieties of calculi which, from one cause or another, affect the bladder. During a long experience in the hospitals of Caen, Dr. Denis-Dumont was struck with the almost complete absence of patients affected with stone—almost complete, because there were a few cases whose habitual beverage was wine. On treating these cases with cider, they were either considerably benefited, or entirely relieved of their malady. Struck with these facts, Dr. Denis-Dumont entered into correspondence with a large number of the medical practitioners of Normandy, principally those who practiced in localities where cider was the common and almost sole beverage. Of those practitioners, some of whom were of forty years' experience and longer, none had treated a case of stone. If they had treated any affection allied to stone, it was in cases where cider was not the ordinary drink, or it was due to some foreign cause. As a consequence he has collected a mass of valuable observations, which confirm his conjectures, and support him in formulating the proposition that cider is not only a prophylactic against the formation of stone and other affections of the bladder, but also that it is an energetic curative agent, when in the condition to be absorbed, like any ordinary drink, and brewed in the best manner. Cider, even in Normandy, is frequently improperly made—but it would seem that bad cider is not worse than bad wine. The writer using the precaution to declare that he is not of Normandy, goes on to say, with the effusion of a Frenchman, that, if the results of Dr. Denis-Dumont are admitted, they will furnish cause enough for the encouragement of plantations of apple-trees, and for the fabrication of a beverage which laughs at phylloxera, which has been served on the table of a queen of France, to St. Radegonde; which Charlemagne did not despise; which was celebrated after the epic mode in a Latin poem dedicated to the glory of Philippe-Augustus by Guillaume le Breton, and which Francois the First appreciated on his visit to Normandy.—*Maryland Medical Journal*.

CHOLECYSTOTOMY AND EXTIRPATION OF THE GALL BLADDER.

Dr. Martin Burke, of New York, has recorded (*New York Medical Record*) two cases of successful incision of the gall-bladder. The first was a youth aged 18, incapacitated from work through a pain in the abdomen, which was severe and constant as long as he stood erect. Immediately to the right of the ensiform cartilage was a small fluctuating tumor, painful on pressure, and of the size of a duck's egg. There was slight jaundice and elevation of temperature, little or no constipation, and no abdominal tenderness, except over the swelling. Suppuration of the gall-bladder was diagnosed; and Dr. Kearney, a colleague of Dr. Burke, made an incision into the swelling. A large quantity of bile and pus escaped; and, a week later, a probe could be passed through the wound three inches deep into a cavity. The wound healed rapidly. The second case was that of a woman aged 50, a rheumatic subject. She had been seized a year before treatment with a violent pain in the right hypochondriac region. Local sensitiveness on pressure continued, notwithstanding frequent blistering and leeching. A second acute attack supervening, an incision was made over the tender spot in the hypochondrium; an abscess-cavity was thus opened, and fifty gall-stones discharged, their combined weight being one hundred and thirty grains. Poulticing, as applied before the operation, was continued, and the wound was washed out thoroughly every six hours. A drainage tube was kept in the wound for eight days. After a week of continued convalescence, the patient completely lost her appetite, which was restored by the use of the wine of Mariana, which appears to contain coca. Recovery was perfect. Throughout the course of this case jaundice appears to have been entirely absent. Extirpation of the gall-bladder was recommended by Langenbuch at the Congress of German Surgeons last year, and has been undertaken in three cases with the view of preventing the repeated accumulation of gall-stones. The first operation gave a satisfactory result. In the second case no stones were found, but the gall-bladder was much thickened and inflamed; the patient was cured, and there was no return of the pain which was felt before the operation. The third case was that of a woman, aged 34, who had suffered for about a year from violent hepatic colics; the pain had become continuous, and the patient was unable to work. A hard and painful tumour could be felt in the

region of the gall-bladder; an incision was made, and the gall-bladder was found much thickened and contracted around two large calculi; the whole sac was extirpated, and a complete recovery ensued. Langenbuch advises to begin by detaching the gall-bladder from the liver, and then to tie the cystic duct.



DIAGNOSTIC VALUE OF KOCH'S BACILLI IN SPUTUM.

Dr. Henry S. Gabbett, (*Br. Med. Jour.*, April 26) gives some interesting observations on the examination of 110 cases of diseases of the chest, with a view to ascertain the presence of Koch's bacilli. In sixty-five of the cases bacilli were found in the sputa, and with few exceptions these were cases of phthisis. In forty-five cases in which no bacilli were found in the sputa, none were diagnosticated as having phthisis.

Dr. Gabbett thinks that it would be almost impossible for any one to carry out a methodical series of examinations such as those he has detailed, without being convinced that the presence of Koch's bacilli in the sputa has an intimate connection with that morbid condition or those conditions known as phthisis. The broad result of the above experiments is this: the great majority of specimens of bacilli—containing sputa were from undoubtedly phthisical patients, and the remainder from persons who, in all probability suffered from the disease; while the specimens of sputa free from bacilla were, as a rule, from cases where the lungs were either healthy or affected by some totally distinct morbid process. The first exceptions to this latter assertion, and the instances in which the bacilli were repeatedly sought for in vain, and at length found at some later period, lead me to the conclusion that, while the presence of these organisms is, in all probability, positive evidence of phthisis, their absence under certain circumstances does not negative the existence of the disease.

The conclusions that may be drawn from the experiments performed by Dr. Gabbett he summarizes as follows :

1. Koch's bacilli occur in the sputa of pulmonary phthisis, acute and chronic, in all its forms.
2. They do not occur in other common diseases of the chest.
3. They may probably be found in every case of phthisis which has advanced to the stage of breaking down of tissue.
4. The discovery of very few bacilli in the sputum conveys no certain information as to the gravity of the case. Their occurrence in enormous swarms in all probability denotes excavation.

USE OF OPIUM AS AN AID TO SURGERY.

Mr. George Pollock, F.R.C.S., (*British Medical Journal*, April 26) says that "In Squires' last edition of the *Companion to the British Pharmacopœia* opium has three main physiological effects. It diminishes pain (insensibility), it causes sleep, it arrests secretion, excepting that of the skin, which it promotes."

This appears to Mr. Pollock to be a very inadequate estimate of the beneficial uses of opium. As far as his experience permits him to value its properties, it certainly has great influence, but in what manner he will not attempt to explain, not only in arresting secretion, but in helping to restore healthy action in most conditions of ulcerations and slough, in giving tone and support under many circumstances, and especially in soothing and quieting the nervous system in gangrene or mortification of the extremities, with not unfrequently a very satisfactory local result. In the latter class of cases, opium frequently appears to help in maintaining life until the condition of the part is no longer an immediate source of danger, or it places the patient in a state which enables the surgeon to undertake with some hope the local treatment of the diseased extremity.

It is in the various conditions of gangrene that opium may be said to stand alone as useful and powerful for good. Whether the gangrene be the result of injury in old age, or whether it appear in old age, or whether it appear in an ulcer in advanced life, kept open by neglect, or rendered more irritable from exposure—in fact, in almost every condition approaching to gangrene, or partaking of it, save too or three, the administration of opium may and should be had recourse to; always with safety, frequently followed by great advantages, and not unfrequently helping to restore the patient to health and prolonged life. "If I were to restrict my pharmacopœia for gangrene to a single drug" writes Mr. Travers, "I should choose opium without hesitation, as being that alone for which I could find no substitute, and of most general efficacy in allaying the irritation, and upholding the powers of the constitution. As for any other narcotic, save opium, they are not worth the mention."

It is in cases of gangrenous ulcers that we have, in opium, a sure helpmate and a certain friend. Administered internally, it arrests or modifies any tendency to ulceration or sloughing; it soothes pain it appears to husband the power of the patient; the irritable surface

or gangrenous edge, under its influence, generally and soon becomes changed to a clean healthy granulating surface, surrounded by its characteristic whitish margin of skin. The external application of opium, in some convenient form, appears occasionally to assist towards such beneficial results, but seldom or never is potent, of itself, to curb the action of ulceration.

In traumatic spreading gangrene, if trusted in solely, it would prove worse than useless. He thinks it would be almost culpable to trust one moment to its administration in such a case. Again, in the form of gangrene attendant on diabetes, opium brings little or no help.

In cases of phagedena he has seen the most satisfactory results follow the internal administration of opium. He would especially its free administration in such cases.

In intestinal obstruction and after operations for hernia, and inflammation of the bowels from external injury, opium is specially serviceable. His rule is not to allow an aperient of any kind until the bowels are naturally relieved.

FOOD AND DRUG ADULTERATION.

The Hon. Wharton J. Green made an excellent speech in the House of Representatives on the 8th instant on the resolution of the Public Health Committee, regarding the adulteration of food and drugs, from which we make a few extracts:

“But, sir, the field is too extensive, proofs too voluminous, if proof be needed where criminality stands confessed, to permit my going into further detail under this head of my subject. But I were derelict to my subject, my constituents, and myself, did I close without some allusion to like vicious practice in the make-up of medicine; for, sir, human depravity, with utter disregard of human life, has even dared invade the sacred precincts of the pharmacopœia, to lift the tops of the mystic jars on shelves arranged, and to infuse base substance in their portentous contents, where oft the difference of a feather's weight may involve the mortal life of immortal men. Medical skill is impotent to act and powerless to grapple with fell disease in critical juncture, because by

base admixture with medicinals it is at loss to know what measure to prescribe to compass the end desired.

"I broadly, boldly make the charge and challenge the refutation of investigation. A distinguished physician told me some years since, in a neighboring city, that probably more deaths resulted directly and indirectly from that source than would from disease if left to itself; and that he made it an inflexible rule never to prescribe medicines unless he was well acquainted with the commercial and moral character of the druggist who was to supply them. If such is the state of the case in a great city, what chance is there of obtaining pure drugs in village shops and country stores?

"Mr. Speaker, this branch of my subject is certainly one demanding most instant and efficacious remedy at our hands. Of all men in the world the chemist and wholesale druggist has least occasion and excuse for tampering with his wares. His profits are enormous when confined to legitimate channels.

"I do not propose, Mr. Speaker, to take down and look into each separate jar on the shelves of the Constitution-amender; am not sufficiently deep in science for that; but I do intend to look into one—and judge the rest by inference.

"I see before me 'sulphate of quinia.' That means in our vernacular 'quinine,' qui-nine, or quin-in, as folks prefer to call it. 'Jesuit's bark' is the staple from which it is compounded, and the introduction of which to the European world entitles the Society of Loyola to the everlasting gratitude of a sinful and suffering world. It is to-day, in the world's conception, almost as indispensable an article to man's welfare as bread or meat or drink. I have heard that out on the raging Wabash or in the Arkansas bottom, where the musical mosquito delighteth to hum and to make his home, where the ague shaketh the sons of men, they would willingly swap, pound for ounce, blood for Jesuit's bark in its etherealized state, known as quinine.

"Now, sir, a short time back, a Democratic House of Representatives, recognizing the indispensable necessity of this light but costly white powder, erased it from the list of the thousand or two other protected articles and put it on the free list, and the whole country arose and called that Congress blessed. Quinine fell from five or six dollars an ounce to \$1.50 nominally. But, sir, I opine the reduction in price is more fictitious than real. The quinine of to-day is not, as a rule, the quinine of former times. Then it was bitter—deucedly bitter—and

there was no horrid apprehension of morphia or other deadly drug left in the mind as afterclap. To-day it is far different, for although not exactly a confection or sweetmeat, it has nevertheless so far laid aside its acerbity as to suggest the thought, *a la* Mrs. Toodles, what a convenient thing a stomach-pump is to have in the house when one is taking white powders.

"Now, sir, I ask why the change in its taste, which is so perceptible as to be the subject of general remark? Is it that the bark of the cinchona tree is losing its natural properties, or is it that less expensive barks and other substances are worked in with it to increase bulk and weight, and thus make up for the falling off in price?

"It would be an interesting investigation if the question were submitted to a special committee of medical experts. The cinchona is doubtless to-day what it was when Pizarro's followers first found it, and so is red oak or willow.

"Almost every leading government in Europe has stringent laws against adulteration. Of these England has perhaps the most perfect and complete system, and yet it is only of yesterday's growth. Less than thirty years ago Dr. John Postgate, a country physician, seeing the abuses perpetrated by adulterators of every class, took the matter in hand, and after years of persistent effort, beginning with only one supporter in Parliament, Mr. Scholefield, and with all the large manufacturers and dealers in Great Britain hounding and denouncing him, succeeded at last in having his ideas adopted as embodied in the adulteration acts of the last decade.

"As a public benefactor he will rank in the history of his country as the peer of Jenner, Stevenson, Arkwright and Davy; for food adulteration is virtually wiped out so far as it affects English palates and constitutions. But what compounders are forbidden to sell at home they can readily market abroad. For it is not obvious that as long as they are debarred a home market by repressory edicts they will naturally export their base counterfeits to our own more tolerant shores? Eliminate the foreign supply of poisoned and poisonous foods, and forbid the sale of 'home manufactured' stuffs of kindred class in the District of Columbia and wherever else the strong arm of the Federal Government will reach, and a most important step in the work of their eradication and extermination will have been accomplished."

We quote at another place remarks in connection with the adulteration of liquors:

"It is safe to assume, Mr. Speaker, that were the question put to the leading medical men of the country a large majority of them would decide that the alarming increase of late years in nervous, cerebral and kidney diseases is directly traceable to the cause assigned, namely, adulterated drinks of all kinds, including vinous, malt and distilled. Is not insanity fearfully on the increase, as evidenced by the overcrowded bedlams of the land and the mania for self-destruction? Then seek for reason why, and find it, too, no less in poisoned beverage than in the growing passion for wild speculation.

"In view of the statements made and facts alleged, all of which are susceptible of proof, I ask, and ask with due deliberation, might not the philanthropist better subserve the cause of humanity by directing the batteries of his denunciation from alcoholic drinks *per se* to the adulteration of them; by advocating purity instead of prohibition?"

We cannot agree with Col. Green in some parts of his argument, but we are pleased to see that the question of adulteration is being so ably discussed.

BROMIDE OF ETHYL AS AN ANÆSTHETIC.

The *British Medical Journal* for March 1st of the current year contains an article upon the Bromide of Ethyl as an Anæsthetic, by Mr. W. Roger Williams. It is, confessedly, supplemental to an effort which is being made in this country to re-introduce the drug as an agent for the production of surgical anæsthesia. Deeply sympathising with every effort to increase our resources, and lamenting deeply the imperfections of all the agents now in use, I yet cannot but think this a mistake. Independent of the very bad record which stands against this drug as an anæsthetic, my opinion is sustained by the results of several self-inhalations; and, as this is a test not very frequently applied, I beg leave to present the results of a few trials, believing them to be of interest at this time. The observations were published in the *Cincinnati Lancet and Clinic* for April 10th, 1880, and are here abbreviated as much as possible, only the important

points being given. I was attended by two medical friends, who noted and recorded the facts of which I could not be conscious.

1. Inhalation was made in the recumbent position, four hours after a moderate breakfast. The first and immediate sensations were a sharp, pungent impression on the air-passages; a sense of warmth, rapidly extending over the body; and exhilaration. Already, with the second inspiration, I felt a decided influence upon the brain, and began to talk. A rapid beating in the ears is a constant symptom with me in inhaling chloroform, which I have often done, and immediately precedes entire loss of consciousness. I remarked its presence now, and also its early appearance. It could not have been later than the third, or possibly the fourth, inspiration when I observed it, and this, as with chloroform, was the last sensation. Upon opening my eyes, I immediately remembered all, could talk clearly, and had no confusion of thought; felt a slight sense of nausea, and a feeling of languor. Eight minutes afterwards I got up and walked about without dizziness, and am confident I could have done so sooner. The pulse, on beginning, and just after ascending the stairs, was 80. Two drachms were administered. The symptoms began after two inspirations. I spoke of general warmth, pleasant sensations, and beating in the ears. Anæsthesia was produced in one minute and a quarter; in another quarter minute it was profound, as tested by the knife-point. The pulse, during the first minute, ran up nearly to 100, then fell during the next minute to about 70, feeble and intermittent. The pupils were unchanged, and normal. There was no struggling or excitement, but tetanic clutching of the inhaler. Anæsthesia lasted one minute and a half, and awakening was without mental confusion. Seven to eight minutes later, the pulse was 64.

2. I was not sure of the purity of the article used, and attributed the irregularity of the pulse to that cause. I therefore obtained another specimen from another house. Inhalation was conducted as before. I aimed to take it more slowly than the first time, and counted the respirations carefully. I experienced the same grateful and pervading glow of warmth all over the body, counted to the seventh inspiration, and beating in the ears was again the last impression. The pulse before, was 80; at the end of the first minute, 120; for one minute and a half, 100; at the end of two minutes, 78; there was no irregularity or intermittence. The pupils were

unaffected. Total unconsciousness was produced in one minute; consciousness returned in three minutes.

3. Fifteen minutes afterwards, I made another inhalation; putting two drachms in the inhaler instead of one. The impression on the air passages was much stronger, and caused coughing. I counted to the third inspiration, and became insensible. The pupils, as before, were unaffected. The pulse, before the administration, was 78; at the end of the first minute, 124; at one minute and a half, 100; two minutes, 78; there was no irregularity or intermittence. Anæsthesia was produced in one minute. At the end of three minutes from the time of beginning, I arose and walked across the room with effort. In eighteen minutes I was driving to see a patient. Not the slightest nausea was experienced after these two inhalations.

These observations establish fully the great pleasantness of bromide of ethyl as an anæsthetic, the remarkable rapidity of its action, and the wonderful rapidity with which its influence passes off. Do they inspire confidence in its safety? Is not such violent perturbative effect on the heart's action dangerous *per se*? I would draw special attention to a few sentences above, in view of the fact that the statement is made, by the friends of the bromide, that they use it only for the early stages of anæsthesia.—*British Medical Journal*.

NEW TEST FOR LEAD.—Dr. A. W. Blyth has announced that cochineal is one of the most delicate tests he has found for the presence of lead. The test is a one per cent. solution of cochineal in proof-spirit. Ten drops of this is added to a fluid ounce of the water contained in a white porcelain dish.

If the water is free from lead the color is simply a dilution of the pink tint; but if it contain but one seven-hundred-thousandth part of lead the tint will be a purplish pink, and if it be as much as one seventy-thousandth part it will become a purple blue.—*Pharm. Rec.*

NOTES.

THE *Atlanta Medical and Surgical Journal* comes to us now in a greatly improved dress, and showing editorial skill and discrimination. The cover is adorned with a portrait of Dr. Crawford Long, the alleged discoverer of anesthesia.

It will be seen by an advertisement on another page that the Visitors Board of the Medical College of Virginia, of Richmond, will meet 6th June to elect a new faculty, to supply the vacancies caused by the death of Dr. Coleman, and, the impairment of voice of Dr. McCaw. We trust that only good and experienced teachers may be selected.

GRAVE MOUNDS IN NORTH CAROLINA.—In the March *American Naturalist* there is a description by Dr. Cyrus Thomas, of "The Nelson Mound" found in Caldwell county. It is illustrated with a wood-cut which shows, that unlike mounds discovered elsewhere, this consists of a circular excavation 38 feet in diameter, with a covering, raising the mound slightly above the pit. Four skeletons were found in a squatting position, two lying full length. To persons who find pleasure in exhuming the aborigines from their last resting place, this must prove a nice morceau.

URIC ACID.—Dr. Latham read a paper on the formation of uric acid in animals, its relation to gout and gravel, together with an explanation of the mode of action of some of the remedies used in the treatment of these diseases. Dr. Latham pointed out that the beneficial effects of remedies used in gout and gravel were due either to the removal from the system of glycochine (calomel and rhubarb, for instance, causing biliary discharges from the alimentary canal), or to the remedies combining with glycochine, as benzoic acid and salicylic acid do, and so preventing the formation of uric acid; or, if the uric acid existed in the blood, by decomposing it with such remedies as iodide of potassium. Hydriodic acid in the laboratory decomposed uric acid into carbonic acid, ammonia, and glycochine; and Dr. Latham attributed a similar effect to iodide of potassium in the system. He further pointed out that the imperfect metabolism of glycochine might in another way, by its oxidation in the tissues or in the blood into oxalic acid, lead to the development of the so-called oxalic acid diathesis. He thought it probable that the nervous symptoms which sometimes preceded gouty attacks were due to the presence of oxalic acid formed in this manner.—*Br. Med. Journal*.

OBITUARY.

WILLIARD PARKER, M.D.

The death of Dr. Williard Parker took place in New York on April 25th, 1884. Dr. Parker was born in New Hampshire, in September, 1800. He was educated at Harvard University, and graduated in 1826. In 1836 he was called to the chair of Surgery in the Cincinnati Medical College. In 1839 he was appointed Professor of Surgery in the College of Physicians and Surgeons of New York. This position he held until 1870, when he resigned the active duties of the chair and became an Emeritus Professor. Dr. Parker was at one time the foremost surgeon in New York, and his fame became world-wide. He was not a writer, but as a lecturer and practitioner he was both successful and popular. He was a man of the purest character and high moral worth. His influence was equal to that of any physician who has practiced the profession of medicine in the city of New York during this century.—*Maryland Medical Journal*.

SAMUEL D. GROSS, M.D., LL.D., D.C.L.

The life-work of this great man is finished, and how magnificent that work has been! Rather should we say, how magnificent it is, for though 'tis finished, and the great mind which wrought it has ceased to be, the perfected work will live on till there is no longer a place for the art of medicine. Even while we write there is sorrow in the profession, throughout the length and breadth of our land; and wherever science is known, and greatness and learning honored, his death will be deplored.

Samuel D. Gross, M.D., LL.D., D.C.L., Oxon., LL.D., Cantab., LL.D., Edinb., died on Tuesday, May 6th, at his residence in Philadelphia, after an illness of some weeks. He was born near Easton, Pennsylvania, in July, 1805, and was therefore in the seventy-ninth year of his age. He received his classical education at Wilkesbarre, and at the High School at Lawrenceville, N. J., and began his medical studies at an early age, under the preceptorship of Dr. J. K. Swift, of Easton, after which he continued for nearly two years under the celebrated Dr. George McClellan, of Philadelphia. He was graduated from the Jefferson Medical College in 1828, and entered upon practice in Philadelphia.

The leisure hours which fall to the lot of every young practitioner were spent by Dr. Gross in the translation of several standard French and German works. But his ability and activity removed him above the plans of the translator, and two years after graduating he brought out his first original work upon Diseases and Injuries of the Bones and Joints." At this time he removed to Easton, but was elected in 1833 as Demonstrator of Anatomy in the Medical College of Ohio. This position he accepted, and two years later was

elected Professor of Pathological Anatomy in the Medical Department of the College in Cincinnati. Here he delivered the first systematic course of lectures on pathological anatomy ever given in the United States, writing meanwhile his second book, "The Elements of Pathological Anatomy," the first work of its kind published in this country. From this chair he was called to the Chair of Surgery in the University of Louisville, where for ten years he gave evidences of the genius which was subsequently to be honored by the civilized world. From this chair he was called to that of Surgery in the University of New York, but returned at the end of one year, at the earnest solicitations of his former colleagues. Here he remained until 1856, when his Alma Mater called him to teach in the halls whence he had gone forth as a distinguished student.

Shortly after coming to Philadelphia he founded the Pathological Society of Philadelphia, being its first President. In 1867 he was elected President of the American Medical Association, and four years later was chosen Chairman of the Teachers' Medical Convention in Washington. In 1872 he visited Europe for the second time, not as an unknown or rising man, but as a master in his science and art, a successful surgeon, and an author, whose reputation had circled the globe. While in England, the University of Oxford celebrated its one-thousandth anniversary, and gracefully complimented the great surgeon and American medicine by conferring upon Dr. Gross the degree of D.C.L. In 1880 the University of Cambridge conferred upon him the degree of LL.D., which degree he had already received from the Jefferson College. On April 17, 1884, the University of Edinburgh, at its tercenary anniversary, conferred the degree of LL.D upon him, and the University of Pennsylvania paid the same tribute to his learning on May 1st.

Now the least among his honors was his unanimous election to the presidency of the International Medical Congress, which met in Philadelphia in 1876. In 1880 he organized the American Surgical Association, of which he was President until 1883.

Of his greatest literary work, his "System of Surgery," it were scarcely necessary to speak. While his fame goes down to the posterity of succeeding generations as a blessed heritage, his great work on surgery will remain a tangible legacy to the students of many lands and tongues.

In four great cities Dr. Gross has been a teacher of surgery, and thousands of his pupils are now scattered throughout the Union. As a teacher of surgery he has long been recognized as the greatest which the country has ever produced.

At a dinner given to him in Philadelphia, in April, 1879, Dr. Gross said:—"After fifty years of earnest work I find myself still in the harness; but although I have reached that age when most men, tired of the cares of life, seek repose in retirement and abandon themselves to the study of religion, the claims of friendship, or the contemplation of philosophy, my conviction has always been that it is far better for a man to wear out than to rust out. Brain work,

study, and persistent application, has been a great help; it has been a great comfort to me, as well as a great help; it has enhanced the enjoyment of daily life, and added largely to the pleasures of the lecture room and of authorship; indeed, it will always, I am sure, if wisely regulated, be conducive both to health and longevity. A man who abandons himself to a life of inactivity, after having always been accustomed to work, is practically dead."

How truly he carried out these precepts is seen by the fact that, within a few weeks of his death, he has prepared two able papers—one on "Wounds of the Intestines," for the American Surgical Association, which met in Washington last week; the other on "Lacerations of the Female Sexual Organs," for the Obstetrical Section of the American Medical Association, which met in the same city during the present week. Though well-nigh four score years of age, he has never allowed the great mind which has guided the surgical world to become for one moment idle.

As a companion and as a host Dr. Gross was one of the most genial and generous of men, and few who ever heard his voice will forget its majestic power and sweetness. As a writer he was most voluminous.

In 1843 he published "An Experimental and Critical Inquiry into the Nature and Treatment of Wounds of the Intestines," and it is a curious coincidence that just forty-one years afterward he should contribute a paper on this subject; in 1851, "A Practical Treatise on the Diseases, Injuries and Malformations of the Bladder;" in 1854, "A Practical Treatise on Foreign Bodies in the Air Passages," and the same year he issued a "History of Kentucky Surgery." In 1859 he published his noblest work, "A System of Surgery, Pathological, Diagnostic, Therapeutic, and Operative," the sixth edition of which was put out in 1882. At the outbreak of the war Dr. Gross issued a "Manual of Military Surgery," which passed through two editions and afforded important service in fitting young military surgeons for the better and more efficient discharge of their duties on the field and the hospital. In 1861 he edited a large volume entitled "Lives of Eminent Physicians and Surgeons of the Nineteenth Century." In 1876 he published a "History of the American Medical Literature from 1776 to the Present Time," and the same year an elaborate paper entitled "A Century of American Surgery."

In addition to the comprehensive standard works already mentioned, Dr. Gross also made many other noteworthy contributions to the literature of the medical profession, chiefly in the form of monographs and miscellaneous papers, contained in the current medical press of the country.

Dr. Gross leaves four children, upon one of whom, Professor Samuel W. Gross, now gracefully rests the mantle so long worn by his distinguished father, as Professor of Surgery in Jefferson College.

In addition to his numerous titles from American and British in-

stitutions, he was member or fellow of several foreign societies, including the British Medical Society of Vienna, the Royal Medico-Chirurgical Society of London, and the Clinical and Pathological Societies of London.

Dr. Gross was the first to suggest and perform the operation of wiring the dislocated clavicle to the sternum, or acromion process; the suturing of divided nerves and tendons; deep stitches for wounds of the abdomen; the direct operation for the radical cure of hernia by suturing the pillars of the ring; an operation for the cure of neuralgia in old persons, and a modification of Pirogoff's operation, and was the first to describe prostaticorrhæa. Eminence in medicine, whether as an art or a science, requires labor which demands the most untiring industry, and a high order of talent. In neither of these requisites was he wanting, and whether progress in medicine be regarded as the history of the profession or the development of the curative art, it would be impossible to omit the history of his untiring and fruitful labors. Profoundly learned in all the anatomical, medical and philosophical lore of his own and former times, there was lacking in him no quality requisite for an encyclopædic writer, whether in the literary or professional world. Of him, as of the father of modern medicine, it may be said that, "finding medical science confounded under a multitude of dogmatic systems, he appears to have made it his object to reform these evils, to reconcile scientific requirements and practical skill, to bring back the unity of medicine as it had been understood by Hippocrates, and at the same time to raise the dignity of medical practitioners."

There are epochs in the history of medicine with which famous and undying names are inseparably associated, and there are great names belonging to special departments in medicine. His fame will rest securely on that highest work of having guided the current of medical science into new channels, and leading it into more fruitful fields by directing attention to the internal and real conditions of disease. His introduction of the study of morbid anatomy into this country makes him the bridge which spans the chasm between the epochs of the exclusive study of symptoms and the later efforts to find the cause of diseases by thorough scientific study. In his life was summed up the progress of medical learning, the elevation of his profession, and the extension of the limits of medical knowledge.—*New York Medical Record*.

THE SPONTANEOUS COW-POX case recurring a year ago in Baltimore which has since been investigated by Dr. St. George W. Trickle, only gave negative results. He has also arrived at the conclusion that there is no such thing as spontaneous cow-pox.—*Maryland Medical Journal*.

May be Hering's *Kuhpocken an Kuhen* might be of service to the doctor.

BOOKS AND PAMPHLETS RECEIVED.

Report of the N. C. Insane Asylum, for the Year of 1883. Goldsboro, N. C.: Messenger Steam Power Print. 1884.

Congenital Lipoma. By A. Jacobi, M.D., Clinical Professor of Diseases of Children, College of Physicians and Surgeons, New York. Reprinted from the Archives of Pediatrics, Vol. I., No. II. February, 1884. Jersey City, 319 York Street.

Post-Nasal Catarrh and Diseases of the Nose Causing Deafness. By Edward Woakes, M.D., Senior Aural Surgeon, and Lecturer on Diseases of the Ear, London Hospital. Illustrated with Wood Engravings. Philadelphia: P. Blakiston, Son & Co. 1884.

Medical Annals of Baltimore. From 1608 to 1808, Including Events, Men and Literature. To which is added a Subject Index and Record of Public Services. John R. Quinan, M.D., Member Medical and Chirurgical Faculty Maryland. Baltimore: Press of Isaac Friedenwald. 1884.

Shakspeare as a Physician. Comprising every word which in any way relates to Medicine, Surgery, or Obstetrics, found in the Complete Works of that Writer, with Criticisms and Comparison of the same with the Medical Thoughts of To-day. J. H. Chambers & Co., Chicago, St. Louis and Atlanta. 1834. Pp. 226.

A Manual of Psychological Medicine and Allied Nervous Disorders. Containing the description, Etiology, Diagnosis, Pathology and Treatment of Insanity, with especial reference to the clinical features of Mental Diseases, and the Allied Neuroses, and its Medico-legal Aspects, with a carefully prepared digest of the Lunacy Laws in the various States relating to the Care, Custody and Responsibility of the Insane. Designed for the general practitioner of medicine. By Edward C. Mann, M.D. With Phototype plates and other illustrations. Philadelphia: P. Blakiston, Son & Co., 1883. Pp. 699.

MINUTES

—OF THE—

THIRTY-FIRST ANNUAL SESSION

—OF THE—

MEDICAL SOCIETY OF NORTH CAROLINA.

FIRST DAY—MORNING SESSION.

RALEIGH, N. C., May 20th, 1884.

The Medical Society of the State of North Carolina met in annual convention in the hall of the House of Representatives in the city of Raleigh at 11 o'clock, on the morning of May 20th, 1884, President A. B. Pierce in the chair. The other officers of the Society, Dr. S. Julien Picot, Secretary, and Dr. A. G. Carr, Treasurer, being present.

Prayer was offered by Rev. J. S. Watkins, pastor of the First Presbyterian church, Raleigh.

The address of welcome, by Dr. Eugene Grissom, was the first business of the day, and was as follows :

“In the name of the Raleigh Academy of Medicine and of the State capital, I give you a cordial welcome to the Medical Society of North Carolina. You have assembled once more on the spot where thirty-five years ago a few resolute and far-seeing men organized the body which exists in perennial vigor to-day. An entire generation has enjoyed its beneficent work. Since that period the whole face of the country has changed. Many have been the fluctuations of human affairs. Men and systems have risen and fallen with the changing waves of fortune. Yet, measured by social advancement and scientific progress, we have moved centuries away from that day. Many of the eminent pioneers of this work, F. J.

Hill, Cameron, Strudwick, Haywood, Johnson, Williamson, McKee, W. G. Hill, Tucker, Telfair, Taylor, Crenshaw and others, with numbers of those who immediately joined them, have passed away, full of years and full of honors, leaving a surrounding halo, soft and beautiful, lingering upon the horizon of their career, reluctant to vanish from the scene of their usefulness. But some of the original members remain to receive the grateful plaudits of their brethren and to rejoice with them in the honorable record of an institution which has reflected so much credit upon its founders and the State whose name it bears. That record is known and read of all men. The pathetic language of the original appeal to the medical men of North Carolina portrayed the dangers which threatened and the difficulties which surrounded the profession, and which changed your influence and exertions, have been long since happily removed. Even to speak *only* of those whose labors have been closed by the Great Sealer of lips, shows how rich is the history of this Society in names worthy of lasting renown. Year after year they mingled their common offering with yours at the shrine of humanity, the end and aim of all medical effort. Freely they gave of their knowledge to their younger brethren, and when war lowered upon us, they gave to the soldiers their tenderest care. Speedily the day come when it was freely acknowledged that the citizen soldier of no other Southern State received such attention to their sick and wounded, and such supervision of their means to ward off disease and death, as the troops of North Carolina. A public debt of gratitude is due alike to great numbers of your Society, both *deceased* and *living*. The names of the former I need not repeat, for they are embalmed in memory. Of the claims of the latter I cannot speak as they deserve, for they hear me. There is one other event in the history of your Society which deserves signal recognition by the people, because its blessings are not temporary but lasting, and rest not upon a few, but extend to all who value the aid of skill and experience in the hour of peril. It is to you that the people are indebted for the act passed in 1858 requiring examinations of those who propose to serve as practitioners of medicine within our borders. At a time when many States are discussing the practicability of enacting similar statutes to guard the lives and property of their citizens from the ignorant and incompetent—nay,

from the charlatan and impostor, North Carolina can look upon twenty-five years of steady and successful effort to elevate the medical standard by the enforcement of that wise provision. This event alone is a lasting monument to the labors of the Society. You have now set before you another great task. You are endeavoring to direct the great sanitary movement of anticipating the inroads of disease and of protecting the unwary from the dangers of ignorance and imprudence at home and of neglect and greed abroad. In this age of progress surely we shall not much longer see men eager to analyze the fertilizers which feed their cotton and tobacco, but careless of the food and drink which nourish their bodies; anxious about the safety of their herds, but indifferent to the welfare of their children; expending great sums to punish those who steal their property, but unmindful of what may steal away their health and energies—perhaps their lives. The future of sanitary reform has enormous possibilities of good. Mighty as have been the triumphs of the healing art, yet greater will be the day when the world shall know that to prevent disease is grander than to heal it. It will be your task in the unselfish spirit which is the life of the true physician, to lead the people in the paths of wise living and to guide their employment of the organs with which God has endowed them, in a manly obedience to both the physical and moral laws of their structure. Alas! how often the sapping and mining of the *bodily* health by ignorant indulgence or unsuspected surroundings, have only preceded the fall of the whole moral and mental process of our fellow-man. This is a subject too vast to consider here, but the single reflection exhibits the grand opportunities for good that lie within your influence steadily exerted upon the law-making power and the whole face of society. Medicine shares the spirit of the times, and her banners are set along the lines of progress. Although your profession reaches into remotest antiquity for its records, and holds the accumulated thought and skill of the nations of the earth, it is ever new as well as ever old. Men will always suffer—men will always die as long as time endures. Love will always seek to soothe and to save, and as the world advances she will plead the more earnestly with medicine to rescue the beloved object from destruction's grasp. All the social forces impel your ancient and honored craft into the forefront of the human tide. Wisely did Seneca exclaim of old that in a thousand

ages opportunity would not be wanting to add something to science. Medicine is ever on the watch to gather for her alembic from earth and air and sea. She bends her ear to the bedside and her eye to the microscope, and her hand grasps the scalpel in every land and under every sun, that she may be fitted the better to do her master's will. I welcome you as men of science. While the true physician will handle skilfully the instruments of his art, he must know more than the art itself. His mental life is with the noble science of which the art is the temporary expression. He reveres the great names of medical literature, but he bows to no error as truth though hoary with a thousand ages. He compares, he investigates, he measures, he weighs and rejoices to feel that the revelations of truth are as sure as the annual return of the spring-time which calls his brethren to their intellectual feast. I welcome you as veterans in the grand army of humanitarians. In the dark hour of peril, when friends have turned in fright from stricken victims, and horror flapped its black wings over the ravages of fell disease, your profession has gone forward, stout-hearted and alone, to battle with the grim hosts of pestilence and death. Some of you have staunched the ebbing life-blood under the hail of hostile shot. You have braved the summer's sun and the winter's storm in the pursuit of duty. You have struggled for victory even at the edge of the grave, and to-day you can count happy monuments under God of usefulness to your country. But chiefly I welcome you as lovers of your fellow-man. Hard must be the heart that could witness the saddest scenes of distress—of bodily suffering and mental agony—of shame and of remorse—sometimes of unutterable despair, without the tear of compassion and the hand of relief.

“Happy are those whose life-work it is to set the rainbow of hope amid the tear-drops of woe. Sweet is the rest hallowed by the prayers and blessings of the restored and redeemed. But no eulogium is necessary at this day upon a profession weighted with such vast responsibilities and such brilliant triumphs.

“You are not only charged with the health and lives of the people, but as their family physicians you have access to their dearest secrets. You are the confidants of their closest intimacy. You are the counsellors of the critical hours which determine their destiny. In no small degree will the character of the people partake of the type of their medical advisers, for impressions made in the dependent

moments of life remain in the inmost constitution. Charged with such far-reaching influences, the respect and regard of the good fall like flowers in your pathway, and every patriot will rejoice in your prosperity or sympathize in your adversity. I cannot close these simple words of greeting without reminding you that we stand in the home of some of our respected and noble dead—of Haywood, of Johnson, of McKee, of Hill, of Tucker, of Jones, of Little. The ancients were wont upon days of high festival to wrap the images of their noble ancestors in their robes of office and to celebrate the glorious record of their achievements. We rejoice that the fame of our late companions in every part of the State is enshrined in the hearts of the people; the trophies of their skill survive them, and the recollection of their deeds is cherished amongst the precious heirlooms which medicine and philanthropy shall preserve in North Carolina. In the name of the people who are proud of the high standard of medical science you have preserved, and in the name of your brethren, whose hearts and homes open gladly to greet you, let me once more bid the State Medical Society thrice welcome to the City of Oaks.”

The address was a model of excellence, both in the sentiments expressed and in the eloquence which marked its delivery. The President warmly returned the thanks of the Society for the generous welcome extended them by the Raleigh Academy of Medicine, and on behalf of the Society he most cordially invited the citizens of Raleigh to attend and witness the deliberations of the Convention.

The calling of the roll was the next order of business, and the following members were found present:

Drs. N. J. Pittman, R. B. Haywood, J. B. Dunn, E. B. Haywood, A. B. Pierce, H. W. Faison, P. E. Hines, George A. Foote, Eugene Grissom, J. W. Jones, W. R. Wood, Thomas F. Wood, F. J. Haywood, G. G. Smith, H. T. Bahnson, R. F. Lewis, James McKee, Willis Alston, W. J. H. Bellamy, W. T. Ennett, W. I. Royster, Francis Duffy, L. L. Staton, A. G. Carr, J. W. Vick, P. L. Murphy, T. D. Haigh, L. J. Picot, W. C. Murphy, W. J. Cooke, W. H. Whitehead, R. H. Speight, W. C. McDuffie, N. S. Henderson, George W. Long, R. H. Lewis, J. D. Roberts, A. M. Lee, Richard J. Noble, W. H. H. Cobb, E. H. Hornaday, A. W. Knox, Hurbert Haywood, D. M. Prince, J. A. Sexton, J. C. Walton, Julian M. Baker, R. H. Adams, J. L. Nicholson, Thomas Hill, S. P. Waldo, T. R. Robertson, J. Anderson,

Thomas M. Jordan, R. L. Payne, Jr., T. F. Meisenheimer, W. C. Brownson, A. D. Pair, H. B. Weaver, A. J. Battle, J. T. Strickland, J. B. Gunter, S. H. Rogers, W. L. Hudson, W. H. Bobbitt, K. M. Ferguson, J. H. Anderson, P. J. Macon, F. M. Garrett, Leroy Chapell—(70.)

BOARD OF EXAMINER'S REPORT.

The following gentlemen passed successful examinations: Drs. R. E. Lee Dixon, B. W. Best, Julian A. Smith, M. C. Whitfield, Frank W. Brown, Louis L. Sasser, J. L. Macumber, Mark P. Perry, W. B. Pritchard, W. E. Richardson, H. P. Murray, J. A. Burroughs, E. T. White, G. T. Sikes, G. J. Robinson, W. D. Pruden, J. M. Manning, T. C. McSwain, James Spicer, W. Edwards, T. B. Williams, V. A. Whitley, J. T. J. Battle, J. W. Long, M. R. Adams, W. G. Freeman.

The President then announced the following Committee on Credentials: Dr. A. W. Knox, of Raleigh; Dr. W. R. Wood, of Scotland Neck, and Dr. J. W. Jones, of Wake Forest.

PARTIAL REPORT OF THE COMMITTEE ON CREDENTIALS.

Dr. Knox, chairman of the Committee on Credentials, reported the following names for membership:

F. M. Garrett, All-Healing Springs; Leroy Chapell, Forestville; W. G. Freeman, Murfreesboro; W. C. Freeman, Seven Springs; W. J. Jones, Goldsboro; James A. Burroughs, Asheville; Frank W. Brown, Greenville; Julian A. Smith, Wilmington; John L. Macumber, Wilmington; W. D. Pender, Robersonville; John W. Long, Randleman; Mark P. Perry, Macon; William Edwards, Castalia; P. J. Richardson, Eagle Rock; G. T. Sikes, Grissom; William B. Pritchard, Wilmington; John M. Manning, Pittsborough; F. T. Fuller, Raleigh; H. P. Murray, Wallace; T. G. McSwain, Fayetteville; V. A. Whitley, Norwood; John B. Beckwith, Smithfield; L. L. Sasser, Smithfield.

The Committee on Credentials made a further report through Dr. Knox, offering the names of Dr. W. C. Lankford, of Wake Forest; Dr. Leroy Chapell, of Forestville, and Dr. F. T. Fuller, of Raleigh, as eligible to membership in the Society. The report was adopted.

On motion of Dr. Wood it was ordered that the election of the Board of Medical Examiners for the ensuing six years should be deferred until the next day, and made the special order for 12 o'clock.

Dr. Bahnson, of Salem, read a letter from Dr. Otis F. Manson, of

Richmond, honorary member of the North Carolina State Medical Society, expressive of his regrets at his inability to be present and participate in the proceedings. He stated as the cause of his absence the prevalence of an epidemic of typhoid fever in Richmond.

Dr. Lewis, in the absence of the chairman of the Committee of Arrangements, made the announcement that tickets had been provided for the members of the Society to attend the Opera Olivette Wednesday evening, and that they would be distributed during the morning session.

The Secretary then read from the desk the following programme of arrangements for the entertainment of the visiting members of the Society:

May 20—Visit to the Insane Asylum—carriages at Yarborough at 4.30 P. M. sharp. Reception at Peace Institute from 6.30 to 8.30 P. M.; reception at St. Mary's School from 8.30 to 10.30 P. M.

May 21—Dinner at Yarborough Hotel at 4.30 P. M.; oration by Dr. Julien Baker at the Hall of the House of Representatives at 8.30 P. M.

Under the head of miscellaneous business Dr. Wood of Wilmington made a motion to the effect that the election of the new Board of Medical Examiners be recorded as the special order of business for twelve o'clock noon of the next day, Wednesday.

On motion of Dr. Julien Picot, Hon. W. N. H. Smith and Associate Justice Merrimon were invited to seats on the rostrum.

COMMITTEE ON FINANCE.

The chairman announced the Committee on Finance as follows: Dr. W. C. McDuffie, of Fayetteville; Dr. A. W. Knox, of Raleigh; Dr. Willis Alston, of Warren; Dr. W. H. Whitehead, of Rowan.

Dr. Staton moved the appointment of a committee of five to revise the by-laws and report at the next meeting. Dr. Carr, of Durham suggested the "revision" of the members of this Society, and that efforts be made to induce them to abide by the present by-laws.

Dr. Weaver offered a resolution as follows:

Resolved, That there be appointed by the President a committee of seven—two from the eastern, three from the central and two from the western portion of the State, whose duty it shall be to memorialize our next Legislature, by petition or otherwise, urging upon that body in as strong terms as possible the justice of, and necessity for, an amendment of the present law relating to the practice of medicine and surgery,

found in sections 3,122 and 3,132 chapter 34 of 'The Code,' so that it shall be taken and accepted that any person who shall practice medicine or surgery, or any branches thereof, unless he shall have been first licensed so to do by the Board of Medical Examiners of the State of North Carolina, shall be guilty of a misdemeanor.

Action on the resolution is deferred, by special motion, until Wednesday.

PARTIAL REPORT OF THE COMMITTEE ON CREDENTIALS.

The Committee on Credentials reports through Dr. Knox the presence of Drs. Wood and Bellamy as delegates from the New Hanover County Medical Society; of Drs. Pittman and Speight as delegates from the Edgecombe County Medical Association, and Dr. Nat. S. Henderson delegate from Caswell County Medical Association.

Dr. Knox reports further the name of Dr. F. M. Garrett, of King's Mountain, an ex-member of '59, for membership.

The Secretary read communications from Mr. Joseph A. Henly, of Raleigh, inviting the members of the Society to attend a German to be given by him complimentary to the Society on the evening of the same day (Tuesday), and from the Monogram Club, to attend a Hop to be given the next evening (Wednesday) in special compliment to the Society. Dr. Knox, on behalf of Maj. R. S. Tucker, extended an invitation to the Society to visit the Institution for the Deaf, Dumb and Blind.

Voluntary remarks on medical subjects having been declared in order by the chairman, Dr. J. W. Jones, of Wake Forest, made an inquiry upon a matter which came under his observation in New York twelve years ago relative to the connection between encysted tumors of the vulva and sterility in women. Dr. Jones states that during the past twelve months he had met with two cases of sterility in women attended with encysted tumors of the vulva, both of whom had borne children previous to the appearance of the tumors. The tumors were removed, but sufficient time has not yet elapsed to allow of an opinion as to the probable effects on sterility in these cases by the removal of the tumors.

There being no further business before the Society, an adjournment was moved until 10 o'clock A. M. of the next day (Wednesday).

SECOND DAY—MORNING SESSION.

The Society assembled at 10 o'clock A. M., Dr. Pierce, the President, in the chair.

Dr. Thomas F. Wood read before the Society the following communication from Mr. James C. Munds, of Wilmington, Secretary of the North Carolina State Pharmaceutical Society:

OFFICE SECRETARY OF THE NORTH CAROLINA
PHARMACEUTICAL ASSOCIATION,

WILMINGTON, N. C., May 12th, 1884.

To the Medical Society of the State of North Carolina:

GENTLEMEN:—At the last meeting of the North Carolina Pharmaceutical Association the President in his address referred to the prescribing of large doses of potent remedies (see page 9 proceedings of Pharmaceutical Association of 1883), and the committee to whom said address was referred reported as follows:

“WHEREAS, The prescribing large doses of potent remedies is frequently a cause of much embarrassment and annoyance to pharmacists regarding the advisability of dispensing the same without first consulting the prescriber, be it

“*Resolved*, That the North Carolina Pharmaceutical Association respectfully request all physicians in prescribing such drugs to attach some device or by other means indicate they are aware of the unusual dose that they are prescribing.” (See page 17 proceedings Pharmaceutical Association, 1883.)

I was directed by the Association to present the above for your consideration.

Very respectfully,

JAMES C. MUNDS,

Secretary N. C. Pharmaceutical Association.

In connection with this matter Dr. Wood read excerpts from the minutes of the Fourth Annual Session of the North Carolina State Pharmaceutical Association meeting, as follows:

“It is to be regretted that the Committee on Revision did not deem it wise to formulate a set of maximum doses, especially of the more potent remedies. While, as before remarked, there is no law compelling an adherence to the Pharmacopœia, yet if the committee had seen proper to prescribe a maximum dose, beyond which the physician be requested not to go without affixing some sign (an exclamation point, for instance), showing that he is cognizant of, and intends to prescribe a larger dose, how much of embarrassment and anxiety would be saved

the pharmacist. While we may do little or nothing in this respect with the country at large, may we not do something in our own State? I respectfully suggest that a resolution embodying this idea be transmitted to the State Medical Society by this Association, with the request that they urge upon their members the importance of a compliance therewith. This, as you are aware, is no new idea, but is regarded as of such importance in other lands as to cause the most stringent laws to be enacted for its enforcement and heavy penalties prescribed for its violation."

Also:

"As regards the matter of the prescribing more than maximum doses by physicians, we beg to offer the following resolution, the same to be transmitted, at their next meeting, to the members of the North Carolina State Medical Society:

"WHEREAS, The prescribing of large doses of potent remedies is frequently a cause of much embarrassment and annoyance to pharmacists, regarding the advisability of dispensing the same without first consulting the prescriber, be it

"Resolved, That the North Carolina Pharmaceutical Association respectfully request all physicians in prescribing such drugs to attach some device or by other means indicate they are aware of the unusual dose that they are prescribing."

At the close of his remarks Dr. Wood moved the appointment of a committee of three to take action relative to the matter and report at the next meeting.

REPORTS OF COMMITTEES.

Dr. McDuffie, chairman of the Committee on Finance, reported as follows:

Balance in hand at last session (1883).....	\$ 71 80
Amount received at said session.....	523 20

Total.....	\$595 00
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Contra:

Expenses for year 1883.....	\$524 59
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Balance in Treasury.....	\$ 70 41
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We recommend the same assessment of \$2.00 per capita, as heretofore, and that the Secretary and Treasurer be paid same salary as before.

W. C. McDUFFIE,
WILLIS ALSTON,
W. H. WHITEHEAD.

Dr. L. L. Staton read the report of the Section on the Progress of Surgery. Subject: "Abdominal Surgery."

Dr. Long moved that Dr. Staton's paper be referred to the Committee on Publication.

On motion, Dr. J. L. Nicholson, the special essayist, was requested to read his paper. Subject: "Animal Heat; Its Sources and Variations."

Dr. McDuffie moved that a vote of thanks be given to Dr. Nicholson in recognition of the especially excellent and admirable nature of his paper.

Dr. W. H. Bobbitt, of Raleigh, took the floor on a question of privilege, and read a communication setting forth his grievances as follows:

"*Mr. President*:—I rise to a question of personal privilege. In the interests and rights of myself, of this Society and of our profession, I feel it my duty to do so.

"I was admitted a member of this Society at the meeting in Tarborough last year. In October following I removed from Rockingham, where I had been engaged in the practice of medicine for two years, and located as a practitioner in the city of Raleigh.

"Since my connection with the Society I have studiously observed its rules and regulations, and faithfully adhered to the recognized code of ethics of the profession as adopted by this Society.

"Soon after I located in Raleigh I joined the Raleigh Academy of Medicine in good faith. Before joining either this Academy or the Society I informed myself of the action of the State Society at its meeting held in Wilmington in 1880, in reference to the fees for examination of applicants for life insurance. The result of the discussion of this question, then and there made, was as follows: That the usual examination fee of five dollars did not apply to examination of applicants for a mystic order with a beneficiary or benevolent feature. The Society decided, as the proceedings show, that it did not apply to examination of applicants for such orders as the Knights of Honor. I soon found, after connecting myself with the Raleigh Academy of Medicine, that this action of the State Society was not popular with the Academy, and that the members literally repudiated it. For this reason, and because the Academy were not inclined to allow me privileges guaranteed to me by the State Society, I severed my connection with the Academy. After this withdrawal, and not before, I joined the Order

of Knights and Ladies of Honor, and was appointed its medical examiner. Before I had examined a single applicant for life insurance in this body, I received an official communication from the Academy notifying me that henceforth the fellows would refuse me consultation so long as I maintained the attitude I then held. The attitude, I take it, referred to the fact that my fee for examination, and fixed by the Knights and Ladies of Honor, was and is two dollars, whereas the Academy had fixed the fee for examination of applicants for insurance at five dollars per head, and five dollars additional when an analysis of the urine had to be made.

"Now, Mr. President and fellow-members of the Society, I have made this running statement in order that you may see and determine my status in the Society. The fellows of the Academy are, in common with me, members of this Society. If I have done anything wrong or in violation of the regulations of this Society or the recognized code of the profession, the Society will please say what it is and wherein I have transgressed. On the other hand, if this has not been done by me, I wish in this defense of my course for that endorsement and support, which a member has a right to claim, whose only offense is in obeying that decree of the Society which is my shield and armor in this matter. It may be said that this is a local matter, personal to myself, and that the Society should not be troubled with its consideration and investigation. But it involves a principle that is important to us all and to the profession; and I have mistaken the objects of this Society if the members now assembled ignore the question presented, or decline to define my status, rights and relations. There is evident antagonism in this insurance matter between this Society and the Raleigh Academy of Medicine.

"So long as I was connected with the latter I observed its rules and regulations as to insurance fees and all other matters. Why I should be refused consultation by its members, after withdrawing, because the charge against me was no other than a compliance with the law of the State Society, I leave it to the Society to investigate.

"The Academy refuses to make any distinction between old line companies and benevolent societies with an insurance feature. The State exempts from taxation these benevolent associations, and the State Medical Society recognizes the same great principle of charity and benevolence which constitutes one of the glories of our profession,

and allows the fees to be less than for old line companies with their millions of assets.

"With this, Mr. President and gentlemen, I leave the matter with you, and await your impartial decision."

Dr. E. B. Haywood, of the Raleigh Academy of Medicine, states that the Academy, of which he is a member, has a regular fee bill, and by this bill applicants for examination for entrance into Insurance organizations are charged not less than \$5.00, and \$5.00 additional is charged should an examination microscopical and chemical be made of the urine. Another law of the Raleigh Academy of Medicine is to the effect that any infringement or departure from the established fee bill shall deprive the party guilty of the offence of the privilege of consultation. This rule was in force before Dr. Bobbitt became a member of the Raleigh Academy. The question of charging a less fee for examinations for beneficent organizations has been discussed by the Raleigh Academy recently, and the result was the ratification of the old rule. It is required that any one joining the Raleigh Academy of Medicine shall sign the Constitution and Fee bill.

Dr. Bellamy moved that the matter be referred to a committee appointed by the chairman for adjudication.

Dr. Hines stated warmly that the question had been decided *irrevocably* by the Raleigh Academy of Medicine, and that they will continue the same regulations in force in the future.

Dr. Satchwell: "I am no examiner for an Insurance Company, nor am I a member of any beneficent organization with an insurance feature. I have no personal axe to grind in this matter, but for the good of the Society I wish no such disturbing question to be discussed publicly, and I therefore move an amendment to the motion before the house, to the effect that the matter be referred to the Board of Censors, and that they be instructed to report at this meeting.

The question was discussed very warmly by several members of the Society, among others Drs. Faison, Bellamy and Roberts.

Dr. H. G. Bahnson, Secretary of the Board of Medical Examiners, made a most interesting report of an historically valuable nature, giving details and statistics as to the progress of the examining system since its inception in 1859.

REPORT OF THE FOURTH BOARD OF MEDICAL EXAMINERS OF THE STATE
OF NORTH CAROLINA, AT THE CONCLUSION OF THEIR TERM OF OFFICE
(1879-1884)—MAY 25TH, 1884.

The Legislature of North Carolina, on the 17th day of February, 1859, passed "an act to incorporate the Medical Society of the State of North Carolina, and for the establishment of a Medical Board of Examiners." In this paper a brief history is given of the work accomplished by the Board of Medical Examiners during the twenty-five years of its existence.

The law as originally passed required the Medical Examiners to meet alternately in Raleigh and Morganton, on the first Monday in May of every year. Only in 1871 was the law so amended that they were allowed to meet at the same times and places as the Medical Society assembled, and traveling expenses and a small per diem were to be paid out of such money as they might receive from the granting of licenses. That under such difficulties and hardships the Board maintained its existence, is certainly creditable to the medical profession in North Carolina.

The first Board, elected in 1859, was composed of the following gentlemen :

Dr. Jas. H. Dickson, of Wilmington, President.

" Chas. E. Johnson, of Raleigh.

" Caleb Winslow, of Hertford.

" Otis F. Manson, of Townsville, now of Richmond, Virginia.

" Wm. H. McKee, of Raleigh.

" Christopher Happoldt, of Morganton.

" J. Graham Tull, of Newbern,

with Samuel T. Iredell, Secretary and Treasurer.

At their first meeting, in 1859, one applicant was examined and granted license, viz :

Lucius C. Coke, M. D., Palmyra, Halifax county.

In 1860 seventeen licenses were granted and one refused.

In 1861 twelve " "

In 1862 one " " and two refused.

There is no record of any meeting of the Board during the three following years.

In 1866 the second Board was elected :

Dr. N. J. Pittman, Tarborough, President.

" E. Burke Haywood, Raleigh.

Dr. R. H. Winborne, Edenton.

“ S. S. Satchwell, Rocky Point.

“ J. J. Summerell, Salisbury.

“ R. B. Haywood, Raleigh.

“ M. Whitehead, Salisbury ;

and Wm. Little was chosen Secretary and Treasurer.

Dr. Whitehead resigned in 1868, and Dr. J. F. Shaffner, of Salem, was elected to fill the unexpired term.

In 1867 five licenses were granted.

In 1868 there is no record of any meeting.

In 1869 eight licenses were granted.

In 1870 five licenses were granted.

In 1871 one license was granted.

In 1872 two licenses were granted.

The third Board was elected in 1872 :

Dr. Charles J. O'Hagan, Greenville, President.

“ W. A. B. Norcom, Edenton.

“ C. Tate Murphy, Clinton.

“ George A. Foote, Warrenton.

“ J. W. Jones, Tarborough.

“ R. L. Payne, Lexington.

“ Charles Duffy, Jr., Newbern, Secretary and Treasurer.

In 1873 nine licenses were granted and one refused.

In 1874 seven “ “

In 1875 thirteen “ “

In 1876 seven “ “

In 1877 fifteen “ “

In 1878 fifteen “ “

In 1878 the fourth Board was elected :

Dr. P. E. Hines, Raleigh, President.

“ T. D. Haigh, Fayetteville.

“ R. I. Hicks, Williamsborough.

“ George L. Kirby, Goldsborough.

“ Thomas F. Wood, Wilmington.

“ Jos. Graham, Charlotte.

“ H. T. Bahnson, Salem, Secretary and Treasurer.

In 1880 Dr. R. J. Hicks resigned his position, and Dr. Richard H. Lewis, of Raleigh, was elected to fill the vacancy.

In 1879 thirty-four licenses were granted—five refused.

In 1880 twenty-six “ “ —seven “

In 1881 thirty-eight	"	"	—five	"
In 1882 twenty	"	"	—five	"
In 1883 thirty-one	"	"	—one	"
In 1884 thirty-four	"	"	—two	"

One license was rescinded on account of grossly immoral conduct of the recipient.

Previous to the organization of the present Board a branch of medicine was assigned to each examiner, who for the six years of his term conducted examinations on that branch alone. The present Board, at its first meeting, instituted a system of rotation, so that each member would examine on a different branch each year. The first examination of the applicant for license was conducted privately by each examiner. The notes of these examinations were afterwards compared at a meeting of the whole Board, and the result determined by vote. In cases where a re-examination was required, this was conducted before the whole Board, and a member of the Board was selected by the President to examine on such branches as had at the first examination been assigned to other members of the Board. The fairness of this method cannot be questioned, and the unanimity of opinion thus acquired by the whole Board, in the case of each applicant examined, was most remarkable. In the light of these explanations the following tabulated statement is interesting :

From University of New York.....	21	graduates licensed, none refused.	
" Bellevue Hospital Medical College	21	"	"
" Jefferson Medical College.....	21	"	"
" University of Virginia.....	5	"	"
" Medical College of South Carolina	6	"	1
" University of Maryland.....	29	"	"
" University of Pennsylvania.....	5	"	"
" Long Island College Hospital.....	2	"	"
" Philadelphia University.....	1	"	"
" University of Edinburg, Scotland,	1	"	"
" Harvard College.....	1	"	"
" Medical College of Richmond, Va.	1	"	"
" University of Iowa.....	1	"	"
" Coll. Physicians and Surgeons, N.Y	2	"	"
" Washington University, Baltimore	15	"	3
" Coll. Physicians and Surgeons, Balt.	25	"	4
" Louisville Medical College.....	11	"	1
" Kentucky School of Medicine.....	1	"	1
" Baltimore Medical College.....	1	"	1
" Central University, Louisville, Ky.	none	"	1
" Edenboro College, N. C.....	none	"	1
" Vanderbilt University, Nashville,	3	"	1
" University of Tenn. (Nashville)...	none	"	1
" Atlanta Medical College.....	1	"	1
Non-graduates.....	9	"	9
Total.....	183		25—208

RECAPITULATION.

The first Board of Medical Examiners examined thirty-four applicants, granted license to thirty-one and refused three.

The second Board granted twenty-one licenses.

The third Board granted sixty-six licenses and refused one.

Under these three Boards, therefore, a total of one hundred and twenty-two were examined, of whom one hundred and eighteen received license.

[NOTE.—It is probable that no accurate record was kept of applicants who were refused license.]

During the six years of its existence the fourth Board of Medical Examiners has examined two hundred and eight applicants for license. To one hundred and eighty-three of these licenses were granted. Twenty-five were found unfit to receive license, and of this number sixteen were graduates of chartered medical schools.

In conclusion, the Board return their sincere thanks to the Medical Society, the Press and the people of the State for their cordial support and co-operation. They have endeavored to do their duty without fear, favor or prejudice, and now resign their trust into the hands of those from whom, six years ago, they received it. They retire from their arduous and most unpleasant field of labor with the belief that their conscientious efforts to maintain the standard of medical education and protect the people of their State against ignorance and incompetency have not been in vain.

Respectfully submitted,

P. E. HINES, M.D., President.

T. D. HAIGH, M.D.,

GEO. L. KIRBY, M.D.,

THOMAS F. WOOD, M.D.,

JOS. GRAHAM, M.D.,

RICHARD H. LEWIS, M.D.,

HENRY T. BAHNSON, M.D., Secretary.

RALEIGH, N. C., May 22, 1884.

Dr. Satchwell moved that a vote of thanks be tendered the retiring Board in recognition of their very efficient and faithful services while in office.

Dr. Lewis offered a resolution: That the names of all the licentiates of the different Boards of medical examiners since 1859 be

published in the county paper of each county in the State for thirty days.

Dr. Wood, of Wilmington, offered as an amendment: That the names of each licentiate since 1859 should be printed in an extra reprint of the Report of the Board of Examiners, and that the North Carolina Board of Health be permitted to take the matter in hand; and that the names of these licentiates be published in several of the leading papers in the State. The motion was adopted as amended.

On motion of Dr. A. W. Knox, of the Committee on Credentials, the vote by which Messrs. Pender and Spicer were admitted as members of the Society, was reconsidered. It was found that both were under age. It was ordered that the certificates given them be filed with the Secretary until such time as they shall become twenty-one years of age, and that then the licenses shall be issued.

The President announced as the special order of business for the hour the election of a new Board of Medical Examiners. Nominations were declared in order. Drs. Royster, Knox, Alston, McKee, Bellamy, W. R. Wood, Murphy, of Morganton, Lilly, of Concord, Frank Duffy, G. W. Long, of Graham, Picot, W. R. Wilson, A. B. Pierce, McDonald, G. G. Thomas, Ennett, Payne, Reagan, Speight, McNeil and Budd were nominated, and the balloting occupied considerable time. At the end of the second ballot the following gentlemen were found to be elected, and it was so announced by the President: Drs. Bellamy, Knox, Frank Duffy, Reagan and Murphy.

The election of the two remaining members of the Board was deferred until the next day.

Dr. William C. Whitfield offered resolutions expressing the thanks of the Society to Dr. Eugene Grissom and Dr. F. T. Fuller for their elegant hospitality; also to the principals, teachers and pupils of St. Mary's and Peace Institute for the admirable entertainments, literary, musical and calisthenic, given the Society. The resolutions were adopted by a rising vote.

Dr. Lewis, of Lumberton, exhibited before the Society a bed of his own invention, the special advantage of which was an apparatus attached for the turning over and about in bed of corpulent persons.

The President announced the following committees:

Committee on Nominations—J. W. Jones, Wake Forest ; S. S. Satchwell, Rocky Point ; Richard H. Lewis, Raleigh ; G. G. Smith, Concord ; W. R. Wood, Halifax.

Committee on Revision of By-Laws—Thomas F. Wood, of Wilmington ; P. E. Hines, Raleigh ; E. B. Haywood, Raleigh ; G. A. Foote, Warrenton ; J. B. Dunn, Raleigh.

There being no further business before the meeting, a motion to adjourn was made and carried.

SECOND DAY—EVENING SESSION.

The members of the Society assembled in the Hall of the House of Representatives at 6 : 30, to listen to the address of Dr. Julian S. Baker, of Tarborough. Dr. Baker's address was heard by a large and intelligent audience, and the frequent applause accorded the speaker made evident the fact of the excellence of his address, extracts from which are given below. The speaker was introduced by President Pierce. The subject of his address was : "The Relation of the Medical Profession to Modern Science." Dr. Baker said :

"Since the first evidence of intellectual activity of the human race the mind of man has busied itself with the consideration of certain questions regarding his existence, which in our time, with all our boasted civilization and enlightenment, are still unanswered to the satisfaction of every one. Ancient philosophers put forward many systems by which, for a time, man's origin, his mission and his place in nature were determined. Modern philosophers grapple with the same problems with the advantages of accumulated experience and a higher degree of intellectual culture. It is natural that, to the medical profession, which has had such intimate relations with life in its varied aspects, some degree of authority should be ascribed, and upon the members of that profession certain duties imposed in regard to the solution of the disputed questions. For an intelligent conception of this relation, and our duties in regard thereto, a consideration of modern philosophical ideas and scientific facts is necessary, so that, with this knowledge, an appeal may be made to our own reason, independent of the fanaticism of this or that particular system.

"The doctrine of evolution is the embodiment of scientific fact, ancient and modern. It is the resultant of contending philosophical systems from the beginning of man's intellectual activity till now. It is a product of the scientific researches of our own generation, and in its gradual development from the ideas of the ancients to its present condition of comparative perfection, its own principle of 'the survival of the fittest' is exemplified.

"The operation of universal, everlasting, unchangeable law has wrought a process of development which this doctrine professes satisfactorily to reason to explain. Primarily its application is only to the explanation of organic change ; but in its broadest sense it is the 'universal theory of development which embraces the whole domain of human knowledge.' And here let us draw a distinction between science and philosophy—science is a knowledge of the laws, principles and relations : it is classified knowledge. Philosophy is the system by which such knowledge is attained : a science of first causes.

"The facts of biology, as determined by embryology and comparative anatomy, has served as the means by which the fundamental laws of race progress are formulated. A history of the individual existence is a condensed history of the race. Recent researches in these sciences have revealed certain facts beyond dispute, facts which anyone may observe for himself, tending to show a structural unity of the higher and lower forms of organisms, thereby supporting the hypothesis of a few simple forms at the beginning.

"It appears that the form next preceding the human, which the ovum assumes in its development, is that of an ape. It becomes necessary to give our attention to this organism, and, as the ancestral form of our species has passed through similar transformation, according to this hypothesis we should consider the catarrhine, or man-like apes, with due respect. Most men are shocked at such consideration, and turn with scorn from any philosophy which traces his genealogy in the line of the apes. It awakens a sudden and profound mistrust, says Huxley, of 'time-honored theories and strongly-rooted prejudices regarding his own position in nature and his relation to the under world of life.'

"Thus the modern scientist claims to have determined man's place in nature, and the conclusion is based on physical facts that he has descended from the apes, and is only a degree higher in the process

of development through which all things are still passing, and which has been in operation through all time ; that he is descended from the apes follows as a 'special deduction from the general induction law of the descent theory, according to the stern commands of inexorable logic.'

"Thus the evolutionist traces the development of the individual and by virtue of the analogy between the life of the individual and that of the human race, he attempts an extension of the doctrine to establish general laws of development, which embrace every organic object, regarding the higher forms as gradually arising out of the lower. The totality of existence by an orderly succession of events or a process of becoming, is under the influence of the same laws as individual existence.

"Fanaticism in evolutionary ideas leads to blind atheism, just as fanaticism in other branches of philosophy obscures the tenets of the whole system. Evolution is not atheism. Darwin himself considers it not only compatible with an original creation, but to supply 'a higher conception of divine attributes than the doctrine of special creation.'

"The question arises, what have we as physicians to do with it? What relation has it to our profession? In our professional relations we are brought in contact with all classes and conditions of people, the high and the low, the learned and the ignorant, religious persons and infidels, the rich and the poor, the fool and the knave, and in such position much can be done to the furtherance of truth and accuracy of ideas. It is not our duty to stifle the investigation of nature's laws by throwing around us the cloak of religious fanaticism, veiling truth with superstition and orthodoxy, unless, after a careful analysis of fact, reason dictates such a course. The foundation of modern science is facts ; the special deductions from these facts we must accept just so far as reason dictates. As scientific men, we must attempt to determine truth without prejudice, and having determined it to our own satisfaction, disregard what others may say unless additional facts prove our conclusions erroneous. The motive is not to break down established opinions, not the destruction of religious creeds. The motive of the true scientist 'is the extension of man on all sides into nature till his hands should touch the stars, his eyes see through the earth, his ears understand the

language of beast and bird and the sense of the wind, and through his sympathy heaven and earth should talk with him.' ”

At the conclusion of the address of Dr. Baker a motion was made by Dr. Knox that the thanks of the Society be tendered Dr. Baker for his most admirable address, and that it be referred to the Committee on Publication.

Adjourned until 10 o'clock A. M. Thursday.

THIRD DAY—MORNING SESSION.

The Society met at 9 A. M. on Thursday, 22d May, 1884, Dr. A. B. Pierce calling the meeting to order.

Dr. J. D. Roberts introduced Dr. Robert B. Stovall, a delegate from the Medical Society of Virginia, and editor of the *Atlantic Medical Monthly*, Richmond, Virginia, and invited him to a seat upon the floor. Dr. Stovall accepted, and invited the North Carolina Medical Society, or as many members as could be present, to attend the next annual meeting of the Virginia Medical Society at Rawley Springs, Virginia.

Dr. H. M. Alford, of Greensboro, tendered his resignation, which was accepted upon the payment of all dues to the treasurer.

Dr. W. J. H. Bellamy submitted the following report :

To the President and Members of the North Carolina State Medical Society :

GENTLEMEN :—Your committee, appointed at the Convention of 1883, to confer with the North Carolina Pharmaceutical Association upon the best means to accomplish the object set forth in the following resolution : “That the druggists and physicians be earnestly requested to keep all poisons in bottles or packages of such shape and character so as to be as readily recognized by the sense of touch as well as of sight”—beg leave to report that they presented this matter to the Pharmaceutical Association at its meeting in Wilmington in August, and asked for a committee of conference from that body. Messrs. W. H. Green, J. K. McIlhenny, of Wilmington, and E. M. Nadal, of Newbern, were appointed as the members of this committee. It was not deemed wise by these committees to report the respective conventions advising a special device to mark

poison bottles or packages, but to ask your permission to place the matter in the hands of the Board of Pharmacy for such further action as they might think best. Your committee agreed, therefore, to report the following resolution, upon which, with this report, they ask your action.

Resolved (the North Carolina Pharmaceutical Association concurring), That all bottles or packages containing poison, as set forth in Schedule A and B Pharmacy Act, shall have such a guard attached (besides the skull and cross-bones label, as provided for in said Pharmacy Act) as will always appeal to the sense of touch of the dispenser and be immediately recognized as marking a package containing a poison, whenever the dispensing druggist shall remove it from its place of deposit for purposes of sale.

Your committee ask that they be continued for another year, with instructions to report your action to the North Carolina Pharmaceutical Association, with the suggestion that the Board of Pharmacy shall notify this body what action they may take upon the matter.

Respectfully submitted,

F. W. POTTER,
W. J. H. BELLAMY,
GEO. GILLET THOMAS.

Dr. Almand Holmes moved that the report be accepted and the committee allowed further time. Adopted.

REPORT OF BOARD OF CENSORS.

Dr. N. J. Pittman presented the following report :

The Board of Censors, to which was referred the matter between the Academy of Medicine of Raleigh and Dr. W. H. Bobbitt of the same place, make the following report : That it is the opinion of the Board that no point of ethics of the State Medical Society being involved, it is not within the province of the functions of the Board, and therefore that the Board does not feel at liberty to make any suggestions in a case which is purely local.

Respectfully submitted,

N. J. PITTMAN,
W. C. McDUFFIE,
R. F. LEWIS.

Dr. Walton arose and made the following statement :

"I rise, Mr. President, to state that while the Board of Censors

in the case of Dr. Bobbitt report that they have no jurisdiction in the matter, that a majority of the members of this Society claim that he has acted in accordance with the rulings of this Society, and in making examinations for benevolent orders he is doing just what this Society has given him permission to do."

ESSAYIST FOR 1885.

Dr. P. E. Hines reported Dr. Hubert Haywood essayist for 1885.

Dr. Hill, of Goldsborough, made a motion to the effect that the ruling of the Society at its Wilmington meeting, whereby members of the Society are allowed to fix their fees for examination of applicants for admission into mystic orders, benevolent associations with an insurance feature, etc., to suit themselves, be rescinded, and that an arbitrary fee of five dollars be charged in all cases.

Dr. Bellamy, in reply to the motion of Dr. Hill, to consider the repeal of the motion to exclude the secret societies, such as the Knights of Honor, from the category of life insurance institutions, remarked that the Knights of Honor were not only charitable and benevolent institutions, but beneficent, doing the good and grand work of such societies as the Masons and Odd Fellows, and still more, in providing for nursing and feeding the sick and providing for the widows and orphans in a substantial way. They are not insurance companies, but like a family circle, have their secrets and sympathies, and he who crosses the threshold without permission is an intruder. This benevolent, yea beneficent institution, has no president, no agents, with high salaries and useless expenses. They provide in an economical and easy way something for the edification, comfort and health of its members while living, and substantial aid to the widow and orphan child. It is wrong and unjust to speak of this institution as an insurance company. The resemblance is not at all striking, its features being quite different in many respects.

After remarks by several others present, the resolution was put to the house and lost, with only two dissenting voices.

A valuable paper upon Obstetrics and Gynæcology was presented by Dr. Joseph Graham for Dr. Simmons Jones, of Charlotte, the chairman of the Section, it was referred to the Committee on Publication.

REPORT OF COMMITTEE OF NOMINATIONS.

Dr. R. H. Lewis, Secretary Committee of Nominations submitted the following report :

President :

Dr. W. C. McDuffie, Fayetteville.

Vice-Presidents :

Dr. James McKee, Raleigh.

“ Thos. E. Anderson, Statesville.

“ W. H. Whitehead, Battleborough.

“ A. G. Carr, Durham.

Secretary :

Dr. Walter C. Murphy, South Washington.

Treasurer :

Dr. R. L. Payne, Jr., Lexington.

Orator :

Dr. L. Julien Picöt, Littleton.

COMMITTEE ON ESSAYIST.

Dr. P. E. Hines, Raleigh.

“ N. J. Pittman, Tarborough.

“ Geo. A. Foote, Warrenton.

COMMITTEE ON PUBLICATION.

Dr. Thomas F. Wood, Wilmington.

“ Geo. G. Thomas, Wilmington.

“ Wm. T. Ennett, Burgaw.

“ Walter C. Murphy, South Washington.

BOARD OF CENSORS.

Dr. W. J. Love, Wilmington.

“ Thomas F. Wood, Wilmington.

“ W. W. Lane, Wilmington.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. L. Julien Picöt, Littleton.

“ A. G. Carr, Durham.

“ Jno. A. Collins, Enfield.

Dr. G. W. Long, Graham.

“ W. T. Ennett, Burgaw.

“ H. T. Bahnson, Salem.

“ J. B. Jones, Charlotte.

“ John Whitehead, Salisbury.

“ N. J. Pittman, Tarborough.

“ T. D. Haigh, Fayetteville.

“ J. B. Dunn, Raleigh.

DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Dr. R. L. Payne, Lexington.

“ G. F. Lucas, Point Caswell.

“ Geo. A. Foote, Warrenton.

DELEGATES TO SOUTH CAROLINA MEDICAL SOCIETY.

Dr. Joseph Graham, Charlotte.

“ W. H. Lilly, Concord.

“ R. F. Lewis, Lumberton.

DELEGATES TO INTERNATIONAL MEDICAL CONGRESS.

Dr. Eugene Grissom, Raleigh.

“ C. J. O'Hagan, Greenville.

“ W. G. Thomas, Wilmington.

DELEGATES TO AMERICAN PUBLIC HEALTH ASSOCIATION.

Dr. J. W. Jones, Wake Forest.

“ J. L. Nichloson, Richlands.

Respectfully submitted,

R. H. LEWIS,	} Committee.
W. R. WOOD,	
G. G. SMITH,	
J. W. JONES,	
S. S. SATCHWELL,	

Dr. Hines invited the new Board of Medical Examiners to meet the retiring Board at 12 : 30 P. M. in room 61, Yarborough House, to receive the papers and make other necessary arrangements for the work before them.

Hon. Montford McGhee, through a written communication, invites the members of the Society to visit the Department of Agriculture.

Dr. G. W. Long offered a resolution as follows :

Resolved, That this Society tenders Dr. L. Julien Picöt and Dr. A. G. Carr the retiring Secretary and Treasurer, its sincere thanks for their faithful and very efficient services.

The resolution introduced by Dr. Weaver, of Buncombe, on Tuesday was called up for action. Dr. Weaver's motion read as follows :

Resolved, That there be appointed by the President a committee of seven—two from the eastern, three from the central and two from the western portion of the State, whose duty it shall be to memorialize our next Legislature, by petition or otherwise, urging upon that body, in as strong terms as possible, the justice of and necessity for an amendment of the present law relating to the practice of medicine and surgery, found in section 3,122 and 3,132, chapter 34, of the Code, so that it shall be taken and accepted that any person who shall practice medicine or surgery, or any branches thereof unless he shall have been first licensed so to do by the Board of Medical Examiners of the State of North Carolina, shall be guilty of a misdemeanor.

A discussion ensued.

Dr. Weaver remarked that the resolution was intended not so much to protect the medical profession—we were able to take care of our interests ourselves—but to protect the ignorant and deluded masses from these vampires who have bedragged and besmirched the profession and who have been sucking the life's blood from the ignorant. He was sure that the next Legislature would support it and suggested that the question be made a political issue in the election of members of the Legislature in the next campaign.

Dr. Pool, of Rowan, felt authorized to say that as far as future legislation was concerned, his county would cheerfully aid in any law for the better protection of the health of the State.

Dr. Lewis expressed himself as opposed to the resolution. He thought it unwise to meddle with the law in force now until the masses were educated up to the point of demanding this penalty clause. He thought that any attempted interference in the matter would result disastrously in the loss of the present law on the subject.

Dr. Foote did not agree with Dr. Lewis. He thought that the Medical Society had educated the public mind up to the desired point. Wherever it was known the present law had met with earnest approval and support and the people already recognized the necessity for a more complete law on the subject.

Dr. Satchwell expressed an earnest approval of Dr. Foote's sentiments. "We cannot go backward" said he, "onward and upward must be our course and we must not listen to advice actuated by cowardice or fear. We should take a higher stand even than the one proposed. We should not petition, we should demand this measure not for ourselves but for the people. We should take a stand with Alabama in elevating the profession and protecting the people. This is no time to ask the question shall we succeed? We may be defeated but we should none the less make the effort."

Dr. R. B. Haywood spoke briefly on the subject agreeing with Dr. Lewis that any attempt to enact this penalty clause would result in the loss of the present law.

Dr. Thomas F. Wood said: He thought the present time very opportune for moving towards the perfecting of our law. We had been the pioneers, in this work, and for a quarter of a century had struggled manfully with an imperfect law, showing clearly that we could achieve more success. We could not afford now to stand still, while our neighbors, stimulated by our example and experience had gone beyond us. As long as the neighboring states had no licensing law we might remain content, feeling satisfied that our present law would work out for us all the protection the people needed. But last year Virginia had made a law, which appeared to be strong, and having a penalty clause, and going into operation, he believed, in October of this year, the result would be that North Carolina would become an asylum for all the unsuccessful candidates from Virginia, and so damage our people, and interfere with the work we have undertaken. He believed that if this point was brought properly to the attention of the Legislature, it would serve as an effective argument. Things had changed materially in ten years. Formerly we stood alone nursing the meagre talent entrusted to us. Since then the conduct of some Medical Colleges had been such as to induce Illinois, West Virginia, Virginia, and Alabama to create licensing boards. Surely in our State, where we have had for so many years an active example of the good to be done by such a Board, we have accumulated some influence. Surely we have, and what other States have done is also an index of public opinion on the necessity of this law. It was not well to go too far ahead of public sympathy and support, but this we now have in a great degree. Our friends in other States are watching

with great interest our management of this law, and in perfecting it we do our State good, and we give encouragement to the profession of the country.

Dr. Faison spoke against the resolution.

Dr. Haigh moved to lay the motion on the table, a motion which was carried by a vote of 28 to 26.

Dr. W. H. Cobb offered the following resolution which was adopted unanimously :

Resolved, That as members of the Medical Society of North Carolina, we pledge ourselves not to admit to our offices as students any persons who cannot satisfy us, by personal examination, that their preliminary education is sufficient to enable them to pursue the study of medicine.

The chairman having announced the hour as that for the holding of the conjoint session of the State Medical Society and the Board of Health, Dr. J. W. Jones took the floor and moved that inasmuch as the President of the Board of Health, Dr. Whitehead, is sick that Dr. S. S. Satchwell be invited to take the chair. Adopted.

Business before the Conjoint Session having been declared in order, Dr. Wood, Secretary of the Board of Health stated the interests and objects of the Board to be in a retrograde condition in North Carolina, while the opposite condition is true of other States. He thinks a crisis is imminent in the history of the Board and that whether it will live or die depends on our success in procuring more money from the State to carry out the objects of the Board.

He furthermore stated that the sum now given by the State was, of course, nothing, and only by the strongest efforts had life been maintained. The burden had been borne long enough, perhaps. If the people did not care to have their sanitary interests promoted you could not make them do it. Theoretically the State gives protection to its people, and the matter of sanitation and the arrest of contagious diseases were important items. But what are we to do if there is not enough general intelligence to endorse laws for this sort of protection. It was true we could educate the people up to this point in time, but how long could a Board without money maintain a corps of educators for this purpose? It had just come to the point when the present Board could not and would not carry the burden any longer without money.

The machinery of our law was well devised in most respects, and if it was liberally interpreted in all the counties as in the county of New Hanover, for instance, the central board could manage to exist. But the County Superintendents in many counties had been starved out, and most of them being unpaid, did not have the stimulus to induce them to report to the Secretary. A few had kept up their reports regularly, as a matter of personal pride, and also out of consideration for the earnest request of the Secretary.

During the year little more had been done than to issue pamphlets on the subject of city sanitation. One of these pamphlets—"A Year's Campaign against Dirt" was largely distributed. The old reports have been applied for, and a new edition has become necessary.

There was now on hand in the Secretary's office several hundred pounds of Vital Statistics Reports, awaiting to be tabulated. The former reports were almost valueless, and there is but little encouragement to employ a force at the personal expense of the Secretary, upon such carelessly made up material.

Dr. Jones discussed the situation of affairs as they stand agreeing with Dr. Wood in the necessity for more money. Dr. Haigh also made remarks upon the resolution as did Dr. McDuffie the Superintendent of Health from Cumberland county.

Reports were made by the Superintendents of Health of Warren, Cumberland and Green counties.

Dr. Satchwell then offered the following resolutions which were adopted :

Resolved, That the President of the State Medical Society be requested to appoint a committee to go before the Legislature and request an adequate appropriation to be used by the Board in behalf of the high and humane objects of the Board.

Resolved, That the State Boards and County Superintendents of Health are requested to meet in Raleigh at some appropriate time during the coming session of the Legislature for the purpose of consultation and of advancing the interests of the State Board of Health; the time to be fixed by the Secretary of the State Board.

Dr. J. W. Jones offered the following resolution which was adopted :

Resolved, That a committee be appointed to watch the complexion and attitude of the next Legislature, and if in their opinion it should be advisable to ask for a change in the law of our Medical Board of Examiners, they should use their discretion to have a penalty clause enacted.

The President appointed the committee as indicated by this resolution : Drs. J. W. Jones, Eugene Grissom, Geo. A. Foote, Walter C. Murphy, S. S. Satchwell, A. W. Knox.

Dr. G. T. Strickland read his report of the chairman of the Section on Materia Medica and Therapeutics which was referred to the Committee on Publication.

The Society then adjourned to meet again at 4 o'clock.

THIRD DAY—AFTERNOON SESSION.

Meeting called to order at 4 o'clock.

The President announced the following appointment of

CHAIRMEN OF SECTIONS.

Surgery.—Dr. J. A. Stevens, Clinton.

Pathology and Microscopy.—Dr. John M. Manning, Pittsborough.

Obstetrics and Gynecology.—Dr. H. B. Weaver, Weaverville.

Diseases of Children.—Dr. Geo. L. Lloyd, Tarborough.

Materia Medica and Therapeutics.—Dr. W. O. McDowell, Scotland Neck.

Practice of Medicine.—Dr. S. S. Satchwell, Rocky Point.

Dr. Pool moved that Dr. Jno. Whitehead as Chairman of the Section on Microscopy and Pathology be requested to send his report immediately to the Publication Committee, he being necessarily detained at home in consequence of the illness of his father. Carried.

Dr. Geo. A. Foote spoke on the subject of "rabies canina," asserting his belief that there had never been a case south of 86° of latitude and that the disease only occurred in cold weather. He expressed an utter disbelief in the "mad stone" declaring that it was a myth.

Remarks on the same subject were made by Drs. Picöt and Carr.

Dr. R. L. Payne, Jr., offered the following resolutions:

WHEREAS, The character of the papers presented to the Society for the past few years, have not reached the standard of excellence that this Society should desire ; therefore, be it

Resolved, That the North Carolina Medical Society offer a premium of a fine case of surgical instruments, case worth \$50, for the best clinical record for the period between this meeting and the next, to be decided by a committee, appointed by the President on the first day of the meeting subsequent to the passage of this resolution.

Resolved, That the papers not securing the prize, shall be given to the Committee on Publication, and if accepted, shall be published in the Transactions of this Society with the name and address of the author.

Resolved, That this prize shall be presented to the successful author immediately after the delivery of the annual oration.

The new officers were then installed.

Dr. McDuffie on assuming the duties of presiding officer for the coming year, said :

"Gentlemen of the Medical Society :

"In accepting the position to which your kind partiality has assigned me, I can only at present return you my thanks for the high honor, and assure you that while I cannot hope to fill it with the ability, of many of my predecessors, I shall not be behind any of them in my zeal to advance the best interest of the Society, or in my determination to maintain the dignity belonging to this exalted station.

"In my annual address I hope to map out some lines for reforms that I think are needed."

The retiring President, Dr. Pierce, then delivered his farewell address subject "Some of the Duties of the Profession." Happy in the relation of his subject the doctor's address was filled with sentiments more admirable and at its close the hearty applause gave evidence of the appreciative attention of his hearers.

On motion of Dr. McKee, the thanks of the Society were tendered the retiring President and his address was ordered to be printed by the Society.

NEW MEMBERS FOR 1884.

The following new members signed the Constitution :

Dr. F M Garrett, All Healing Springs.	Dr. G T Sikes, Grissom.
" Leroy Chappell, Forrestville.	" J M Manning, Pittsborough.
" W G Freeman, Murfreesborough.	" F T Fuller, Raleigh.
" W C Whitfield, Seven Springs.	" Wm B Pritchard, Wilmington.
" W J Jones, Goldsborough.	" H P Murray, Wallace.
" Jas A Burroughs, Asheville.	" T C McSwain, Fayetteville.
" Frank W Brown, Greenville.	" V A Whitley, Norwood.
" Julian A Smith, Wilmington.	" John B Beckwith, Smithfield.
" John L Macumber, Wilmington.	" E T White, Oxford.
" W D Pender, Robersonville.	" G W Purefoy, Chapel Hill.
" John W Long, Randlemann.	" A M Herron, Charlotte.
" Wm Edwards, Castalia.	" M H Futrell, Woodland.
" P J Richards, Eagle Rock.	" B F McMillan, Plainview.
" G L Robinson, Smithfield.	" J L Grimsley, Snow Hill.
" M R Adams, Cool Springs.	" R F Gray, Winston.
" J H Cook, Durham.	" M P Perry, Macon.

TREATMENT OF MASTITIS BY RUBBER TISSUE.

Dr. H. T. Bahnson gave a verbal account of a very satisfactory plan of treating mastitis. He applied a piece of rubber, such as the dentists use for preventing moisture in the mouth during the operation of filling cavities in the teeth. A perforation is made for the nipple and the whole is secured by tapes over the shoulder and around the waist. The rubber applies itself smoothly, and gives a good amount of support, which is followed by prompt relief. This plan, he believed, to be more effectual than the old plan of strapping, and worthy of extended trial.

Dr. Frank Duffy presented a paper on Congenital Occlusion of the Rectum. On motion of Dr. Wood it was referred to the Committee on Publication. Carried.

Dr. Wood also moved that all papers which had been crowded out for lack of time be referred to the Committee on Publication. Carried.

Dr. Geo. A. Foote, offered the following resolution:

Resolved, That the Medical Society of North Carolina return its thanks to the Raleigh Amateurs for the excellent rendition of the "Operetta Olivette" at Tucker Hall on Wednesday evening given complimentary to the Society and by them so much enjoyed. Carried.

Dr. McKee offered the following resolutions both of which were unanimously adopted :

WHEREAS, The object of the address of the retiring President should be expected to be fraught with suggestions and admonitions promotive of good to the profession at large and particularly to the advancement of the Society ; be it

Resolved, That in order to secure the best assemblage of the delegates and members, the address be delivered on the first day upon the organization of the Society, and that the newly inducted President appoint a Committee of three to take those suggestions in consideration and report on it before the close of the meeting.

Resolved, That the thanks of this Society are eminently due and are hereby tendered the retiring President for the patient and efficient manner in which he presided over the deliberations of this meeting and that he be requested to furnish, the Committee on Publication, a copy of the able and eloquent address, for publication, on retiring from the chair.

Dr. W. O. McDowell offered the following resolution :

Resolved, That the thanks of the North Carolina State Medical Society are hereby returned to the Raleigh Academy of Medicine for the hospitable care, and many courtesies during the session of this convention.

The resolution was seconded by Dr. J. W. Jones and it passed unanimously.

Dr. T. D. Haigh said that at this meeting social features had predominated to the exclusion of the usual scientific work and moved that hereafter nothing be allowed to interfere with our usual morning and evening sessions.

Dr. P. E. Hines said in this matter we could not bind future meetings and moved that it be postponed. Carried.

On motion of Dr. Thomas F. Wood, the Society adjourned to meet in Durham, N. C., on the third Tuesday in May A. D. 1885.

A. B. PIERCE, M.D., President.

L. JULIEN PICÖT, M.D., Secretary.

REPORT OF THE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners met in Raleigh on the 19th day of May and continued in session until the night of the 22d of May. Thirty-six applicants appeared for examination, of whom thirty-four were duly licensed, after giving satisfactory evidence of competency and good moral character. The following applicants passed their examinations successfully :

Dr. R. E. Lee Dixon, Wilmington.

“ B. W. Best, Johnson’s Mill.

“ Julian A. Smith, Wilmington.

“ W. C. Whitfield, Seven Springs.

“ Frank W. Brown, Greenville.

“ Louis L. Sasser, Smithfield.

“ John L. Macumber, Wilmington.

“ Mark P. Perry, Macon.

“ William B. Pritchard, Wilmington.

“ W. E. Richardson, Eagle Rock.

“ H. P. Murray, Wallace.

“ James A. Burroughs, Asheville.

“ E. T. White, Oxford.

“ G. T. Sikes, Grissom.

“ G. J. Robinson, Smithfield.

“ J. M. Manning, Pittsborough.

- Dr. T. C. McSwain, Fayetteville.
 “ B. F. McMillan, Plainview.
 “ William Edwards, Castalia.
 “ T. B. Williams, Ridgeway.
 “ V. A. Whitley, Norwood,
 “ J. T. J. Battle, Earpsborough.
 “ M. H. Futrell, Woodland.
 “ John W. Long, Randlemann.
 “ M. R. Adams, Cool Springs.
 “ W. G. Freeman, Murfreesborough.
 “ R. B. Henderson, Middleburg.
 “ J. E. Grimsley, Snow Hill.
 “ G. W. Purefoy, Chapel Hill.
 “ A. M. Herron, Charlotte.
 “ R. F. Gray, Winston.
 “ Herbert C. Williams, Leachburg.
 “ W. D. Pender, Robersonville.
 “ James Spicer, Goldsborough.

The next meeting of the Board will be held in Durham, on Monday before the third Tuesday in May 1885. The following is the order of examinations :

H. T. BAHNSON, M.D.,
 Secretary Board of Medical Examiners of N. C.

The old and new Boards of Medical Examiners met in the Yarrowborough House Thursday noon. Dr. Peter E. Hines, President of the retiring Board offered his congratulations to the incoming Board, and formally surrendered the office to his successors.

Dr. Henry T. Bahnson, Secretary and Treasurer, transferred his books, and a balance of \$482.10 to the new Board.

Dr. Hines invited the new Board to ask any questions which they desired upon the business appertaining to the methods pursued. A free colloquial interchange of experience closed the meeting, the old Board adjourning *sine die*, and the new board proceeded to organize

THE NEW BOARD OF EXAMINERS.

There were present at the meeting of organization : Dr. Wm. R. Wood, Scotland Neck ; Dr. A. W. Knox, Raleigh ; Dr. Francis Duffy, Newbern ; Dr. P. L. Murphy, Morganton ; Dr. Willis Alston,

Littleton ; Dr. W. J. H. Bellamy, Wilmington. Absent: Dr. J. H. Reagan, Weaverville.

Dr. Wm. R. Wood, was elected President, and Dr. W. J. H. Bellamy, Secretary and Treasurer.

The act of General Assembly establishing the Board was then carefully read and discussed.

The different branches of medicine were assigned by lot as follows:

Surgery—Dr. Wm. R. Wood.

Chemistry and Pharmacy—Dr. W. J. H. Bellamy.

Anatomy—Dr. P. L. Murphy.

Practice of Medicine—Dr. Willis Alston.

Materia Medica and Therapeutics—Dr. Francis Duffy.

Physiology—Dr. J. A. Reagan.

Obstetrics and Diseases of Women—Dr. A. W. Knox.

The Board instructed a committee to procure a seal.

The Board adjourned to meet in Durham at 9 o'clock A. M., on Monday before the third Tuesday in May, 1885.

WM. R. WOOD, M.D., President.

WM. J. H. BELLAMY, M.D., Secretary.

RALEIGH, N. C., May 23, 1884.

The North Carolina Board of Health adjourned on the 23d of May, 1884, to meet again upon the call of the President. The next regular meeting will take place in Durham on the third Tuesday in May, 1885.

M. WHITEHEAD, M.D., President.

THOMAS F. WOOD, M.D., Secretary.

REVISED ROLL OF MEMBERS IN THE ORDER IN WHICH THEY SIGNED THE CONSTITUTION.

*Those marked * were present last meeting. Marked (D) denotes death.*

Dr. N J Pittman,* Tarborough.	Dr. R F Lewis,* Lumberton.
" J B Jones Charlotte.	" Jas S Robinson, (D) Elizabeth.
" R B Haywood* Raleigh.	" W J Love, Wilmington.
" Jas A McRae, Fayetteville.	" Jas McKee,* Raleigh.
" Jas B Dunn,* Raleigh.	" L L Alexander, Topsail Sound.
" Will G Thomas, Wilmington.	" Willis Alston,* Littleton.
" S S Satchwell,* Rocky Point.	" W J H Bellamy,* Wilmington.
" J R Mercer, Tarborough.	" Geo F Lucas, Point Caswell.
" E B Haywood,* Raleigh.	" Walter Brodie, Whitakers.
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" H W Faison,* Faison's Depot.	" J L Knight, Tarborough.
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" E A Anderson, Wilmington.	" W T Ennett,* Burgaw.
" Hugh Kelly, (D) Statesville.	" W I Royster,* Raleigh.
" F M Henderson, Concord.	" G Gillett Thomas, Wilmington.
" J J Summerell, Salisbury.	" V N Seawell, Wallace.
" P E Hines,* Raleigh.	" Geo S Aitmore, Newberne.
" M Whitehead, Salisbury.	" S B Flowers, Mt. Olive.
" J G Ramsay, Rowan Mills.	" P W Young, Oxford.
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" Geo A Foote,* Warrenton.	" L L Staton,* Tarborough.
" Eugene Grissom,* Raleigh.	" T R Germon, Ridgeway.
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" J W Jones,* Wake Forest.	" W J McLinden, Wadesborough.
" J F Long, Washington.	" Josh W Vick,* Selma.
" John K Ruffin, Wilson.	" Isaac E Green, Warrenton.
" C W Knight, Tarborough.	" P L Murphy,* Morganton.
" J B Hughes, Newberne.	" Joseph Graham,* Charlotte.
" J C Gidney, Shelby.	" J M Miller, Charlotte.
" Wm R Wood,* Scotland Neck.	" J L Henderson, Mt Pleasant.
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" M T Savage, Scotland Neck.	" J F Miller, Goldsborough.
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" Geo L Kirby, Goldsborough.	" J P McCombs, Charlotte.
" P A Barrier, Mt Pleasant,	" O P Houston, Mt Ulla.
" L A Stith, Wilson.	" S J Gilmer, Concord.
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" W W Lane, Wilmington.	" E J Thorpe, Rocky Mount.
" R L Cowan, Rowan Mills,	" D W Bulluck, Whitaker's,

Dr. W H Whitehead,* Battleborough.

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NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

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SELECTED PAPERS.

ABSTRACTS OF THE LUMLEIAN LECTURES ON THE ÆTIOLOGY OF PHTHISIS.

Delivered at the Royal College of Physicians.

By J. ANDREW, M.D., F.R.C.P.

Physician to St. Bartholomew's Hospital.

[*Concluded from page 236.*]

The causes of phthisis which come next under consideration are those connected with modes of life and industrial occupations. A mere enumeration will be almost sufficient in the case of the majority of the members of this group. It is all but impossible to separate the influences of the day-workshops and of the occupations from that of the houses, and especially of the sleeping rooms, of the operatives, so that whatever arguments on either side might be drawn by a confident statistician could be of little value. The conclusions could scarcely be of greater weight than the premisses. Still, as the influence of the home-life is probably about the same as all the occupations which are paid at the same rate, except, of course, those which must, from their nature, be carried on in specially unhealthy localities, it would be reasonable to attribute, in part at least, to the occu-

pation any great variation from the phthisis mortality in either direction; although it might be impossible to determine the exact proportion in which the conditions of labor and of home-life contribute to it. Still more justifiable would it be to do so in cases where general rules, such, for example, as that phthisis in country districts is more frequent among women, are interfered with. With these limitations, I would divide this group into two subgroups, viz. :

1. Those occupations and modes of life in which there is the possibility, the likelihood if you will, that direct contagion may come into play.

2. Those in which there is no greater danger of such contagion may come into play.

3. Those in which there is no greater danger of such contagion than all of us are exposed to in the ordinary intercourse of life.

1. All modes of life, all occupations which are carried on indoors, contrast unfavorably with outdoor pursuits. The naked savage, whatever ills he may have to bear, rarely finds phthisis among them; but with every addition to his clothing, and to the comfort of his tree or cave, his proneness to it increases. In this respect, in an advanced civilization, the effeminacy or luxury of the rich and the necessities of the poor bring about the same result. Sometimes perhaps, even members of our own profession are forgetful, in the advice they give, of the advantages of the open-air life. I remember more than one medical student with incipient phthisis, compelled by circumstances to undertake country practice in a bleak district, who instead of being injured by the constant exposure to all sorts of weather, has regained seemingly perfect health. In the case of trades, it is impossible to ascertain the true proportion of cases of tubercular phthisis included in the total of deaths from pulmonary diseases; but the facts, such as they are, contained in Dr. Greenhow's "*Local Inquirers into Excessive Mortality from Lung-Diseases*," printed in the Reports of the Medical Officer of the Privy Council for 1860-61, make it probable that here too, as in general statistics, when the death-rate from diseases of the lungs is large, that of phthisis is also excessive. Wherever imperfect ventilation of workshops, with or without overcrowding exists, the possibility of direct contagion must be admitted, whatever may be the nature of the occupation. It would be superfluous to enumerate the well-known industries and localities in which this is the case. A very long, if

not complete list, will be found in the paper just referred to but, at the same time, it must be remembered that, apart from any special infection, exposure to an atmosphere vitiated in this way is invariably recognized as a most potent cause of ill-health, and as a predisposing cause of many other forms of disease besides phthisis.

2. Certain occupations, however, in which there is no overcrowding or want of ventilation, give an abnormally high death-rate from pulmonary diseases, and these constitute my second subgroup. Instead of enumerating the occupations themselves, it will be sufficient to mention the chief causes of their unhealthiness, and these appear to be the following :

a. The presence in the air of fine dust of any kind, of carbonic or of other noxious gases.

b. Exposure to great vicissitudes of temperature.

c. Inhaling hot air, either very dry or very moist.

d. The workman being obliged to carry on his labors in some cramped posture, interfering with the freedom of the respiratory movements.

* * * * *

The causes so far enumerated by no means exhaust the detail of the ætiology of phthisis, but they readily fall into three main classes, which may be roughly termed climatic, social, and personal; and to one or other of these, if phthisis be a diathetic or developmental disease, every one of its possible causes may be referred. If, on the contrary, it depends upon some external exciting cause of the nature of a morbid poison or parasite, then they would stand to this in the relation of predisposing causes. I say of a morbid poison or parasite, for the time has not yet come in which it is possible, in all cases, to draw a distinct line between the two. And yet, even now, diseases of a micro-organism as their exciting cause had been established, ought to be no longer classified as depending upon morbid poisons. For surely a bacillus or a bacterion in the blood or tissues is neither more nor less a parasite than a filaria or spirochæte in the blood, than sarcina in the stomach, than a tapeworm in the intestines, than a trichina spiralis in the muscles, or a fluke in the liver. The chief difference among these unwelcome guests being that some are certainly animal, whilst others are probably vegetable parasites; but the nature of their relation to their "host" is the same in all. However much they may vary in the region or tissue they infest, or in

the effects produced by their vital activities, they all agree in this, that they live, for the time, at the expense of the sheltering organism, and, in so doing, bring upon it more or less damage or discomfort.

Is it possible, then, from the examination of these three groups of causes, to draw any practical conclusion as to the nature of phthisis? I believe it, to be so, and that it is a necessary step on the road to any certain knowledge of a most important subject. For such an examination will make it plain that these causes, singly, or in combination, are insufficient to account for the phenomena of phthisis. That it is not, cannot be, developmental or diathetic, but must be ranked among the specific febrile diseases, and that, therefore, some micro-organism or other must be a necessary condition, and not a mere accident of its presence.

Unless we can find among these causes some one which, is never absent, the very number and well attested rights of the claimants are fatal to the claims of any one of them to be regarded as the sufficient cause. Were they each and all always present, and in definite proportion, then indeed there would be nothing paradoxical in the uniformity of the morbid changes following their action. But that causes so diverse, so distinct, as dampness of soil, exposure to a hot, dry atmosphere, imperfect ventilation, an attack of pneumonia, or the being descended from a phthisical ancestor, or any other causes of the same sort should give rise singly, or in combination, to similar pathological changes, associated with a similar train of clinical symptoms, and this in spite of manifold differences in the personal factor—this cannot be accepted without the production of the most cogent proof, and in default of any simpler explanation. Indeed, the longer, the more complete the list is made under these heads, the more signal does its insufficiency become. Each addition to the roll increases instead of diminishing our difficulty. Many of these conditions are the exciting causes of ordinary forms of disease; e. g., an ordinary bronchial catarrh is frequently induced by exposure to vicissitudes of temperature, or by breathing an irritating atmosphere, whether it be artificial or supplied liberally by nature herself in the form of the spring east winds. That such causes should do this appears natural enough (unless, indeed, we try to realize the mode in which the effect is produced), but that they should also, from time to time, give rise, instead, to a disease with such special constitutional and local characters as phthisis, is hard to

understand, except by giving what seems to me to be undue weight to the influence of constitutional predisposition. In point of fact, the only general developmental disease with which phthisis can be fairly compared in respect of its wide geographical distribution, and its practical uniformity under an infinite variety of conditions, is old age.

Except for the sake of maintaining a paradox, we must look for some one dominant factor, always and everywhere present, which can be shown, at any rate by analogy, to be sufficient to explain not only the general type of the disease, but also the anomalies in its distribution, and the variations presented by individual cases; and such a factor can only be found in some such a micro-organism as the bacillus of Koch. It cannot be found in any of the three groups of causes hitherto considered.

Not many discoveries of equal importance have received such speedy and strong confirmation as that of the tubercle-bacillus. I shall not reproduce here, much less attempt a variation upon, the report by Mr. W. Watson Cheyne to the Association for the Medicine by Research, on the relation of micro-organisms to tuberculosis. Until it be disproved, I am well content to accept the bacillus of Koch as the essential cause of phthisis, and that, too, in the extreme form in which the doctrine has been stated to by my colleague, Dr. Klein, viz., "no tubercle, without bacillus, no bacillus without tubercle." Even should it be proved that this particular bacillus does not hold that this intimate relation to phthisis (although this becomes every day more unlikely), I shall still maintain the same view of the essential nature of phthisis, and look forward confidently to the eventful discovery of its true micro-organism.

Let us see how the hypothesis of a specific organic agent, present in all cases of phthisis as its proximate exciting cause, clears up and reconciles the obscurities and contradictions which exist in every branch of the subject.

I have already mentioned the great difficulty which, on the developmental or diathetic theory, is caused by the practical uniformity of the new growth, and the consequent improbability that it can be due, in different individuals, to so many and such widely different causes. And be it remembered that we are not dealing with a rare disease, of which so few instances have been observed that doubts might reasonably be entertained as to the existence of certain defi-

nite pathological changes, and their relation to clinical symptoms, but with one of the most common and most fatal of diseases, and one which has been known from the earliest times. This difficulty, if it did not consciously suggest, was met by the attempt to disprove the specific nature of pulmonary phthisis, by restricting the term "tubercle" to the miliary form only, and asserting that, in the great majority of cases of the disease, there was no tubercle present at all, but only the effects of non-specific irritations or inflammations; and that the similarity of the symptoms in so many cases was due to the fact that the same organs, the lungs were attacked in each, and not to any identity of the morbid agent or process. A still more unintelligible assertion was made regarding caseous matter, viz., that, although the product of processes having no connection with tubercular disease, it yet became, from time to time, the cause of a new growth, with such well marked special characters as those of miliary tubercle. The attempt failed to produce universal conviction, and its partial success was in great part due to concentrating attention upon the results of what would now, perhaps, be regarded as very inadequate microscopic examinations, to the exclusion of the more general and less easily misunderstood anatomical and clinical phenomena. But surely these last are not the least important factors in determining the nature and relations of any new growth or morbid change. Until such time as our modes and instruments of research are so far improved that all discrepancy between the two ceases to exist; a difference in properties, however slight, must be held to prove a difference more or less complete in kind, in spite of apparent histological identity under the microscope. And, on the other hand, similarity in properties must be held to prove more or less close relationship, if not identity, in spite of histological diversities. All through the dispute, it was virtually admitted, by almost every one engaged in it, that there is something special in the lung of phthisis. The appearances which one man proved to his own entire satisfaction not to be "tubercle," he yet never doubted would be held to be such by some other observer. It must have seemed a little odd, now and then, that the results of so many different processes should be so readily mistaken for one and the same new growth. Those who, like myself, believed throughout in the similar and specific nature of the vast majority of cases of phthisis, and in the essential idea of the various forms of new growth

found in their lungs, welcomed the discovery of the bacillus as a demonstration of the truth of that opinion. I have neither wish nor intention to undervalue the results or to depreciate the labors of the great histologists who endeavored to solve the question of the nature of tubercle by what, with our imperfect resources, was an impossible method. We owe to them all that is exact in our knowledge of the external characters of the various forms of new growth produced by the same internal agent in different individuals and in different organs and tissues; forms which vary of course, with variations in the personal factor in each case. But it is well to recognize the impossibility of success in any attempt to determine the nature of a pathological process or product by its histological characters alone.

* * * * *

Compare the doubt and uncertainty of a few years ago with the certainty of to-day. Many of us must remember the dismay with which, if not himself the parent of some pathological bantling, he heard from the lips of an inquiring student the simple common question, "Pray, sir, what is tubercle?" For my own part, when placed in this predicament, having given in reply the latest, or what seemed to me the best, theory, I was generally careful to add that my answer was only provisional; that tubercle, next year, would probably be something quite different; but that phthisis remained the same, and that its microscopical appearances would not materially change. Now, we feel no hesitation in answering this question. The presence of the bacillus is the essential condition, the others vary within certain limits.

* * * * *

In conclusion, let me recapitulate the conclusions which I have endeavored to establish as to the ætiology of phthisis, with special reference to its contagiousness. None can be more sensible than myself of the many imperfections in the matter and form of my argument.

1. The historico-geographical argument is insufficient to prove that the present distribution of phthisis has been brought about by the carriage along lines of human intercourse of a special morbid germ. Indeed, many of the facts under this head are distinctly antagonistic to any such theory.

2. Before the discovery of the bacillus, one and all of the reported causes of phthisis were inadequate to account for its distribution, or for the anatomical and clinical character of the disease.

3. Those causes, even those which appeared to act as exciting causes, were all predisposing causes only.

4. From the nature of those predisposing causes, their relation to each other, and the conditions under which their influence seemed to make itself felt, it was a probable inference that phthisis belonged to the group of specific febrile diseases; and this view was held by some writers in the face of many difficulties and perplexities.

5. The facts on which this inference was based were insufficient to prove that phthisis was personally contagious, and were, indeed, rather opposed to any such notion.

6. The discovery of the bacillus proved that phthisis was a specific febrile disease; and thus the question of contagion cannot now be usefully discussed without acknowledging this fact.

7. As some specific febrile diseases are contagious, and others not so, this property existing in very different degrees and modes in different members of the group, the question as to the contagiousness of phthisis can only be satisfactorily answered by determining its affinities with other members of the group and by distinct evidence of its contagiousness.

8. Although phthisis may be undoubtedly produced in many ways experimentally in animals and also in man, there is not sufficient evidence to prove that its prevalence is materially affected by direct contagion.

9. In many most important respects it very closely resembles ague.

10. It is at least highly probable that the exciting cause of phthisis, like that of ague, the bacillus, or some other micro-organism, is in no way dependent upon man for its existence, and is widely diffused, irrespective of human agency.

From these, I may be allowed to make one short practical deduction; viz., that the prevention of phthisis, like that of ague, is to be attained by sanitary works, especially by improved ventilation and drainage, and not by isolation; and that, for its cure, as we should not send a case of ague to the Pontine marshes, so, too, it would be wise not to send a case of tubercular disease to any place where the death-rate from phthisis is high among the native population.—*British Medical Journal*.

ANIMAL HEAT; ITS SOURCES AND VARIATIONS.

The Annual Essay delivered before the Medical Society of North Carolina, at Raleigh, May 21st, 1884.

By J. L. NICHOLSON, M.D., Richlands, Onslow County, N. C.

Mr. President and Gentlemen of the Medical Society:

Thanking you for the honor done me at our last meeting, as your essayist I purpose calling your attention, directly and without preface, to the subject of "Animal Heat ; Its Sources and Variations." A subject which, because of its importance and its obscurity, has presented in all ages, from the ancient theorist to the modern investigator, a broad field for useful research and wild speculation.

Without aiming at originality upon such a subject, when I have presented to you a brief historical sketch of its developmental, and given at greater length the present knowledge respecting it, together with a review of some of the evidence upon which this knowledge rests, I shall have completed my effort.

In ancient medical literature, we find various theories and speculations as to the cause and nature of this striking phenomenon ; most of which are purely conjectural and without the slightest evidence in their favor. Hippocrates, we are told, considered the production of animal heat a great mystery, and bestowed upon it many attributes of the Diety (Morrell). Perhaps the most generally accepted theory among the ancients was that which gave the sole power of generating heat to the heart, and held that this viscus was prevented from being consumed only by the cooling effect of respiration. After it became generally known that heat, in the inorganic world, resulted from the union of chemical agents, physiologists for nearly two centuries assigned the origin of animal heat to the action of acids taken into the organism, upon the alkalies formed therein. Von Helmont, Sylvius and many others, believed it the result of an effervescence which took place between the bile and the pancreatic juice. Another class of philosophers, equally wise, claimed that it was the product of putrefactive fermentation constantly going on within the system. Following Harvey's discovery Boerhaave and Douglas declared that the heat produced by the friction of the circulation was

eminently sufficient to maintain the bodily temperature. Dr. Black, a noted chemist and philosopher of the 18th century, strongly advocated the theory—first suggested by John Mayow, of Bath, in 1683—that the lungs, contrary to what had been previously taught, were not a heat depressor, but that they were the great and only heat producers in the animal organism. He held that the greater part of the latent heat of the inspired air became liberated in the air-cells, and was then taken up and carried by the blood to every part of the body. Crawford,* a strong advocate of this doctrine, said: “The blood, in its progress through the system, gives out the elementary fire which it had received from the air in the lungs ; a small portion of this fire is absorbed by those particles which impart the inflammable principle to the blood ; the rest becomes redundant, or is converted into moving and sensible heat.” It is useless for us to say that all such theories are utterly untenable in the light of modern physiology.†

Prior to the brilliant researches of Lavoisier, near the close of the last century, scarcely a single idea had been advanced that threw light upon the solution of this important physiological problem. This observer, who has been justly called “the father of modern chemistry,” put forward the theory, “that respiration is merely a slow combustion of carbon and hydrogen, which is in every way similar to that which takes place in a lighted lamp or candle ; and from this point of view animals which respire are true combustible bodies which burn and consume themselves.”‡ The lungs were called the human furnace, and the oxygen of the inspired air, together with a hydro-carbonaceous substance secreted from the blood, the fuel that supported the vital flame. That the lungs were the precise seat of combustion, was opposed by La Grange and a few others, but was very generally accepted up to 50 years ago. In 1837, Magnus, by demonstrating with the mercurial air-pump the presence of both oxygen and carbonic acid, in the arterial as well as in the venous blood, proved its fallacy.

*A. Crawford, M.D., F.R.S.L., etc., *Experiments and Observations on Animal Heat and the Inflammation of Combustible Bodies.* P. 368. London: 1788.

†For the above sketch I am chiefly indebted to Robt. Morrell “*Inaugural Dissertation on Animal Heat,*” New York, 1810, and Dunglison’s *Physiology*, Volume 2. 1838.

‡Quotation from paper of Seguin and Lavoisier, 1789, by A. Flint, Jr. “*The Source of Muscular Power,*” New York, 1877.

With this knowledge of the relation existing between the chemical phenomena of respiration and the generation of heat, Liebig, to whom we are largely indebted for the development of physiological chemistry, divided food into two classes, the nitrogenous or plastic, and the non-nitrogenous or respiratory. The former, he held, was used almost entirely for the building of muscles and other proteid tissues of the body, while the latter class, by directly entering in combination with the oxygen of the inspired air, were the essential elements in the production of heat. From the fact, however, as established by later research, that proteid food may give rise to the formation of fat, a non-nitrogenous substance, this classification, though at one time almost universally accepted, now meets with much disfavor.

While heat undoubtedly stands on the same line with urea, water, and carbonic acid, as the result of chemical movements in the living organism (more or less associated with oxidation) the idea, that this process is a simple and direct combustion of certain calorific elements, in no way differing from the same process in the inorganic world, is no longer held. The experiments of Bert,* and of Ritter, upon dogs prove that increased oxygenation of the blood invariably causes a very decided depression of body-heat, as well as a decrease in tissue metamorphosis. Senator† has shown that the ratio between the quantity of heat produced and the carbonic dioxide given off is not proportional at all times ; and, further than this, Pettenkofer and Voit‡ have demonstrated a very striking disproportion between the amount of oxygen absorbed and of carbonic acid eliminated, under different circumstances. These observers found that the greater part of the oxygen used in twenty-four hours was taken into the system during the night, but that the greater part of the carbonic acid was given off during the day. They proved also that severe exercise, although it caused a very decided immediate increase in the discharge of carbonic acid, had scarcely any immediate influence on the amount of oxygen absorbed during the day. The result of these experiments, together with the fact that oxygen exists in the tissues only in a latent state (Foster), while carbonic dioxide is prominently present, strongly corroborates the opinion, that the

*London Medical Record, April 2, 1873.

†Cited by J. G. Dalton, Human Physiology, p. 306. New York. 1875.

‡Journal Anat. and Phys. Nov., 1867.

production of heat is not the result of a simple oxidation, but that this process goes on, as do all other nutritive processes, under the control of the nervous system.

Since, then, the essential sources of heat in the living organism are exclusively chemical processes, though far more complex than such as occur in simple inorganic combustion, the question naturally presents itself, "What are the substances constantly consumed in thermogenesis?" Undoubtedly, the chief elements are carbon, hydrogen, and nitrogen. According to a series of experiments made by Barrel,* an adult man oxidizes, on an average, in 24 hours, 289 grammes of carbon, and 18.6 grammes of hydrogen. More than nine-tenths of this carbon is entirely consumed and is converted into carbon dioxide before it leaves the body. While it is true that the heat must come, whether directly or indirectly, from the food, and that the carbo-hydrates and fats are preëminently heat producers, it is none the less true, that the albuminoid constituents give rise to a very considerable portion of the body heat. A careful estimate of the amount of heat produced in 24 hours, from a mixed diet, attributes at least one-fourth of the whole product to the oxidation of the albuminoids. From the fact, however, that albuminous bodies escape from the organism only partially oxidized, their heat value is very much diminished.

It may now be asked "when is heat generated?" Necessarily, wherever chemical transformations occur, whether this be in the alimentary canal, in the blood, or in the bioplasm of the ultimate cell. Undoubtedly, a certain amount of heat is produced in the blood, by the immediate oxidation of food taken in excess of the needs of the body. There is abundant experimental evidence showing that the production of heat varies closely with the quantity, as well as with the kinds, of food ingested. Again, according to the theory of Le Conte, as set forth and advocated by Dr. John B. Elliott,† as combustion is held to precede assimilation, not merely as a chronological fact, but as a dynamical necessity. The building force by which tissue construction is carried

*Lehman's *Physiological Chemistry*, pp. 488-9. 1855.

†"Combustion and Assimilation." *New Orleans Med. and Surg. Jour.* November, 1878.

Cited by Dr. E. P. Hurd, "Animal Heat and Fever." *Boston Med. and Surg. Jour.*, June 26, 1879.

on is born, so to speak, of the transformed forces emerging in combustion." The chief seat, however, of heat-production is extra sanguine. It is estimated by Dulong that about four-fifths of the heat normally produced is due to those decompositions which are called tissue-metamorphosis. As proof of this, Bernard has shown, by the use of the thermometric needle, that the temperature of solid tissues is invariably greater, by a fraction of a degree, than that of the traversing blood. Furthermore, each separate organ and tissue is well known to have a temperature peculiarly its own, which is in direct proportion to the activity of its chemical changes. For example, not only is this true of the cerebrum as a whole, it is true of its parts also. For it has been clearly shown by Broca, Gray, and others, that the temperature of its frontal lobes is decidedly greater than that of its occipital.

The muscular tissue, forming as it does from one-third to two-fifths of the whole weight of the body, and being the seat of very active and extensive metabolic changes, especially during exercise, is universally regarded the chief seat of thermogenesis. That there is a decided increase in heat production during muscular activity, there is no lack of the most positive evidence. Becquerel and Breschet* found by means of a thermo-electric multiplier that each contraction of a muscle is accompanied by an increase of its temperature, ranging from 1.8° to 2.6° . It is estimated by Hiedenhain that about one half of the energy liberated in the contraction of any individual muscle assumes the form of heat.

The ratio, however, according to other observers, is not definite, but varies under different circumstances.†

According to modern investigation, the energy daily expended in the form of mechanical labor results from the transformation of a certain amount of body heat. For heat and motion, not less than matter, are indestructible, whether in the inorganic world or in the living organism ; but they may be transformed one into the other, and always without loss. What are the quantitative relations subsisting between them? The investigation of Mr. Joule and others show that one Fahrenheit unit is exactly equal to 772 foot-pounds of motion ; or, in other words, the heat required to raise one pound of water one degree Fahrenheit scale is the exact quantity produced by the fall of a pound

*Simon : "The Chemistry of Man." Vol. 1, p. 127. Berlin. 1842.

†See Foster's Physiology. Second American Edition. 1881.

weight through a space of 772 feet. One heat-unit, then, produced in the animal body may, according to this theory, be converted into 772 foot-pounds of force; and, conversely, this amount of force is equivalent to one Fahrenheit heat-unit. It is estimated that, of the total energy set free in the body during a good day's work, between one-fifth and one-sixth is expended in the form of motion, the remainder leaving the body in form of heat.*

We come now to consider the quantity of heat produced in the body. To ascertain this, physiologists have employed two methods. The first consists in estimating the physiological heat-value of the food daily consumed; and the second, indirectly measuring the heat given out by the body in a definite time. In employing the first method, scientists rely entirely upon certain experiments made by Prof. Frankland some twenty years ago. This observer, by causing their complete combustion in pure oxygen, very accurately determined the total heat value of different articles of food. By assuming that the heat evolved by the oxidation of any given substance is the same under all circumstances, provided only that the same products result, the heat ultimately generated in the living body, from a diet whose total heat-value is definitely known, is ascertained by making the proper deduction for the heat-value of the partially oxidized waste-products.

From experiments made upon himself, Prof. Ranke† estimated that, during the use of a certain diet which exactly maintained his nutritive equilibrium, the daily heat production amounted to 2,200 kilogram heat-units; while, by the use of more abundant food, he found that “the activity of the thermogenetic processes of his body could be increased to 2700 heat-units per diem.” (One heat-unit according to this standard is the quantity of heat required to raise a kilogram of water.—2,201 pounds—one degree centigrade—1.8° F).

To determine the amount of heat eliminated from the body in a given time, Senetor in 1872 made an “elaborate series of experiments upon dogs, he enclosed them in a copper cage properly supplied with air, and surrounded by a known volume of water. After making with the greatest accuracy all necessary corrections for changes in temperature of the animal's body, air, etc., the increase in

*M. Foster: A Text Book on Physiology. Second Am. Ed. 1881. P. 576.

†Taken from paper of Burdon-Sanderson, found in H. C. Wood's work on “Fever—A Study in Morbid and Normal Physiology,” 1880. Pp. 237-8.

the temperature of the water, which in the beginning varied from 80° to 85° F., (26.5° to 29° C.), proved, as the average result of five experiments, that 2.34 heat-units for every kilogram weight of the animal's body were hourly produced ; or, in other words, 4.21 Fahr. heat-units are generated for every pound weight per hour. The somewhat similar experiments of Dr. J. C. Draper, upon his own person, closely agree with the conclusion arrived at by Senator. The results of such experiments, however, on account of the abnormal condition in which the body is placed, are not considered entirely reliable by some observers. Liebermeister, for instance, states that the quantity of heat given off from the body to a bath, whose temperature is 86° F. (30° C.) is for the first half hour double the amount of the usual loss while out of the bath. Further, it has been shown (Winternitz, Ackerman) that the temperature of the various strata of an open bath, may, notwithstanding a previous thorough mixture, vary several tenths of a degree. Nevertheless, it is estimated from experiments under both methods, and with a fair degree of accuracy, that an average adult will produce, during 24 hours of comparative rest, from 2,500 to 3,000 kilogramme heat-units, or about four times as many Fahrenheit heat-units. During very active muscular exercise, however, this quantity is, on account of excessive tissue-metamorphosis, increased at least 50 per cent. ; during sleep, on the contrary, the reduction is not less remarkable.

Having now considered the essential sources of heat, and the quantity generated in varying conditions, it is pertinent to enquire by what means the organism is enabled to maintain its normal temperature. This means must necessarily be a power that controls both the production of heat and its loss. Inasmuch as nearly all the heat produced leaves the body by the skin, it would be impossible to maintain the normal body-heat under the ordinary changes of external temperature, unless there were some internal power to govern this elimination. Such a power exists in the vaso-motor system. For direct observation has shown that the quantity of heat lost by radiation and conduction and evaporation may vary widely, according to the state of contraction or dilatation of the cutaneous capillaries. To this controlling influence of the vaso-motor mechanism was formerly attributed the entire involuntary power of the organism to preserve in health a fixed temperature. That it does exert a powerful influence in this direction, we have the satisfactory evidence,

afforded both by common observation and by the effect of injuries and operations upon the nerve centres. The recent and very able investigation of this question by Prof. H. C. Wood, as recorded in his masterly work on, "Fever: A Study in Morbid and Normal Physiology," very conclusively shows that paralysis of the chief vaso-motor centre, resulting from wounds of the medulla, causes a very decided temporary increase in the dissipation of heat, and a continued decrease in heat production. He says: "the primary cause of the lessened heat-production is vaso-motor paralysis, which probably acts directly and also indirectly, by causing an excessive loss of heat and such a lowering of the internal temperature, as to check chemical reactions in the body." This observer found as the result of a series of calorimetric experiments upon seven dogs, that section of the spinal cord above the origin of the splanchnic nerves was followed by an average decrease of 43 per cent. in the production of normal heat. Indeed, there is no lack of evidence establishing the proposition that destruction of this central vaso-motor centre, which is located in the medulla, is followed by general vaso-motor paralysis and a decided depression in the thermic functions of the body.

From the fact however, that section of the medulla at its junction with the pons Varolii is followed by a steady and very decided increase in heat production, notwithstanding the vaso-motor system is in no way injured, many physiologists have been led to conclude, that there exists somewhere in the brain a special nervous mechanism, which has the power to regulate within certain limits, as may be required by the variations in peripheral loss, the oxidative processes in the organism. The effect of refrigeration upon the body, causing according to some observers, a marked increase in the actual production of heat and of CO_2 , affords very striking evidence in support of this hypothesis.

Thus far, we have reviewed that part of our subject which pertains especially to a state of health. Your attention is now directed to the abnormal variations in body heat, observed in that condition termed fever. For a better comprehension of our present knowledge upon this point, I have thought it not out of place to trace briefly the development of this question from very early times.

The importance of the state of bodily temperature at a factor in disease was perfectly appreciated even by ancient medical observers. Hippocrates, considering the increase of the natural heat of the

body as the very essence of the febrile state, found his divisions of the varieties of the disease upon the degree and the distribution of the heat. According to his theory, the different forms of fever were due to the excess of one of the four humors, blood, phlegm, yellow and black bile, while the increased heat and other manifestations of the disease were the result of an effort on the part of nature to expel or neutralize the morbid humor. So well did such a hypothesis satisfy the ancient mind, that Galen, notwithstanding his powerful genius, was content to teach substantially the same doctrine. For many centuries later, indeed, this theory of vitiated humors, variously modified, held undisputed sway in the medical world ; and when, at length, it was displaced by a rapid succession of other doctrines, these were equally unsatisfactory, and but little less inconsistent with the true nature of fever. Thus in the earlier part of the sixteenth century, Fernel held that fever was not a simple increase of natural heat, but the result of this factor, combined with heat from putrefaction and from toxic infection, which was thrown out from the heart to all parts of the body. In 1648, Paracelsus assigned as its cause the action of sulphur upon saltpetre. Most peculiar was the opinion advanced by Von Helmont* in the 17th century. According to this theorist, there resides in the stomach a material soul that controls and regulates all the vital processes of the organism. In disease, this soul, which he called the Archæus, is primarily affected, and is consequently unable to govern the functions of the body. Under the prolonged influence of the morbid cause, this Soul becomes enraged, and vitiates the humors : the result of this is fever. The cold stage is the fright of the Archæus, and the increased heat is the expression of his wrath. Others found its origin in the putrefaction of the fluids contained in the nerves. Thomas Sydenham, one of the most original and brilliant writers of the 18th century, advocated the doctrine, that disease, of whatever form, is but Nature's effort to cast out "with all her might the morbid matter for the health of the patient." The great desideratum was the separation of the impure from the pure ; the elevation of temperature and the increased heart action accompanying the febrile process were the necessary instruments in Nature's hands for the ac-

*Cited by E. P. Hurd, M.D., "The Evolution of Medicine." North Carolina Medical Journal, September, 1882.

complishment of this end. Later, Boerhaave and his followers, ignoring the diagnostic value of increased heat, attempted to account for fever, in irritation of the heart and vascular system. By the frequency of the pulse alone, they determined the existence of fever and its gravity. All such notions proving unsatisfactory, the theory was advanced, that the nervous system, instead of the fluids or the circulatory apparatus, was the part primarily affected. Hence, according to the noted doctrine of Cullen, there is produced by the remote cause of fever a marked diminution of the energy of the brain and whole nervous system. The first expression of this debility is the phenomena of the initial chill, and especially a spasmodic, or mechanical, condition of the extreme blood vessels. From the increased movement of the heart and large arteries, consequent upon this condition of the arterioles, there arises an abnormal production of heat, through which the energy of the brain is finally restored and the constriction of the small vessels overcome. This being accomplished, the body resumes its normal temperature. Crawford, in accepting that such a condition of the vascular system was brought about by nervous debility, held that the increased heat of fever was due not directly to this fact, but to the consequent absorption of an abnormal quantity of the latent heat of the inspired air. In opposition to all that had been previously taught, numerous theories had been advanced, and the whole subject had fell into much confusion. At length, however, an effort was made by Broussais, to account for the phenomena of fever on the grounds of local inflammation and sympathy between organs. While Broussais came to consider gastro-enteritis as the primary cause of all febrile diseases, other advocates of the local inflammatory theory were equally positive that some other organ, especially the brain or heart, was the seat of the malady.* Dr. Rush,† on the other hand, doubted that there was an actual increase of body-heat in fever, and accounted for the apparent increase, by means of irregular distribution, arising from convulsive excitement of the blood vessels.

Such was the condition of our knowledge of this phenomenon, in

*For Historical Sketch on Theories of Fever—Chiefly indebted to Manual of Pathology, by Ernst Wagner, First American Edition, 1876, from Sixth German Edition. A Treatise on Fever, S. Smith, M.D. Fourth American Edition, 1838. "The Blood" Wm. Stevens, M.D. London. 1832.

†Benj. Rush, M.D., "Med. Inquiries and Observations," Vol. 3. Pp. 22-29

the beginning of the present century. It will not serve our purpose, neither will the narrow limits of this essay allow us, to pass in review the more recent theories which modern pathological research has shown to be wholly inadequate.

As to the nature and mode of origin of the morbid elevation of body-heat, various opinions are held by the prominent pathologists even of the present day. Inasmuch as the normal production and dissipation of heat is controlled, within certain limits, by the nervous system, it is but reasonable to infer that any abnormal elevation must depend in part, to say the least, upon a disturbance in this regulating influence. That such is the case is held by most observers.

Bernard,* in 1875, claimed that fever results entirely from profound modifications of the vaso-motor system, which he believed to exist as two orders—dilators and constrictors. It has been shown, that vaso-motor paralysis, resulting from section of the spinal cord, is followed by even a greater diminution in body-heat, during the febrile state, than in health. (Wood).

According to Traube, decrease of heat elimination is the chief and primary cause of fever temperature. Through irritation of the vaso-motor centre, brought about by the morbid agent circulating in the blood, a contraction of the superficial small arteries occurs; which, by obstructing a free peripheral circulation, causes an abnormal retention of heat, and a consequent rise in bodily temperature. The chill and accompanying pallor is the expression of a sudden and decided tetanus of the superficial arterioles. The digestive disturbances, stupor, lessened secretion of urine, and other characteristic symptoms of fever arise from a similar condition of the vessels of the various internal organs. Complete relaxation of this arterial tetanus is followed by sweating, increased flow of urine, increase in the giving off of heat, and the resumption of normal temperature.

That there exists such a condition of the vessels of the kidneys at least, during the febrile process, is fully demonstrated by the recent experiments of Dr. Walter Mendelson,† of New York. The

**Revue Scientifique*, August 28, 1875.

† "On the Renal Circulation during Fever. An Experimental Research made at the Pathological Institute of the University of Leipzig, &c." *The American Journal of the Medical Sciences*. October, 1883. Pp. 380-403.

fluctuations in the size of the kidney, which were necessarily due entirely to changes in the calibre of its blood-vessels, being accurately determined and recorded by the use of the oncometer and oncomograph of Roy, the result of ten experiments upon dogs shows that this contraction is constant and directly proportionate to the intensity of the fever. It was further found that, by tearing away the nerves connected with the kidney, no change whatever occurred in its volume, during the increase of body temperature. Moreover the effect of artificially raising the temperature of the blood entering the brain, the rest of the body remaining of normal temperature, was to produce an almost immediate contraction of the kidney and a gradual rise of the general arterial pressure. While these experiments prove conclusively the contraction of the kidney to be a concomitant of fever, and due to an irritation of the central vaso-motor centre, they also tend to corroborate Traube's explanation of the rise of temperature in disease by means of retention.

While, therefore, it would seem that the accumulation of heat, because of deficient and irregular dissipation, is frequently, if not always an important factor in the causation of febrile temperature, yet that there is a simultaneous increase in heat production is indicated by the abnormal products of combustion. Many pathologists claim that by far the greater part of the morbid heat is undoubtedly due to excessive oxidation of the tissues—especially the nitrogenous tissues. Wagner, to whose elaborate work on Pathology I am greatly indebted for much material in the preparation of this paper, says that, "even under the most unfavorable circumstances, we find in fever patients an average increase in the excretion of urea amounting to more than double what is thrown out in non-febrile states, under otherwise similar conditions." Ringer, in his experimental study of intermittent fever, found that the increase of urea is in direct proportion to the severity of the fever; "so that, given the height of the fever, we can approximately calculate the increase in the urea; and, vice versa, given the increase of urea, we can ascertain the height of the fever." According to other observers, however, there is frequently a striking disproportion between the increase of temperature and the excreted products of metamorphosis.

Additional evidence of an actual increase in the production of heat is furnished by the result of Liebermeister's experiments, obtained by placing fever patients and healthy persons in separate

water baths of 94° F., and observing, after a stated period, the temperature of each bath. Whatever room there may be for error in such experiments as his, a series of calorimetric measurements by Leyden, in which he allowed the leg of the patient to remain two hours in his calorimeter, the water of which had the same temperature as the surrounding air, shows in the most positive manner that the dissipation of heat during the different stages of fever is invariably greater than the normal. He found, in patients whose temperature ranged from 105° to 107° F., that the rate of giving off of heat is almost double the normal standard. It was further observed that the quantity of heat eliminated may be very different with the same temperature of the blood. In favor of the view that increased production is the only factor, may be stated the fact that, during the most profuse sweating in some cases of typhoid, rheumatic, and other febrile diseases, there is no fall in body heat ; and, as observed by Ringer,* not only does jaborandi fail to lower temperature in intermittent, but there occurs no rise when the effect of the drug has ceased.

It is asserted on the other hand, that the most excessive tissue metamorphosis can possibly produce but a moderate rise in body-heat, so long as the heat-eliminating system remains unimpaired. And, from the fact that the abnormal discharge of urea may precede, as well as accompany and follow, fever, it is clear that, while nitrogenous metamorphosis is an essential constituent, it cannot be the sole factor in morbid heat ; and their relation has not been definitely shown. Again, it is well known that, in certain nervous disorders, arrest of radiation causes very decided elevation with but little or no increase over normal tissue destruction. Mr. Teale reported to the Clinical Society of London, in 1875, a case of shock of the spine, resulting from a fall, which, for seven weeks, was accompanied by an elevation of temperature, amounting to 108° to 122° Fahr. Such a thermometric range, resulting chiefly at the expense of the accumulated material of the body, would imply speedy death. More precise evidence still, that there is only a small increase in normal heat production, is furnished by the fact, that the loss in body-weight during fever is but little, if any, greater than that occurring in the non-febrile state of inanition. If there be a

*London Lancet, October 5, 1878.

lessened giving off of heat in the beginning of disease, it then argues nothing against this theory to say that elimination is increased during fever, for, there being a production above the normal, there may well be an increased dissipation, and yet not proportionate to the augmented production.

From a consideration, therefore, of all the evidence presented, it seems fair to conclude that febrile heat does not wholly result from either of these causes alone, but from a combination of the two ; and that their relative importance may vary widely in different cases.

The recent calorimetric experiments of Wood upon dogs seem to establish such a conclusion. He found in pyæmic fever, artificially produced, that the production of heat is usually in excess of the amount formed in health without food, but less than that which can be produced by high feeding. Again, it was demonstrated that notwithstanding sometimes the heat-production becomes very excessive, the elevation of body heat is but little above the normal standard. His elaborate investigation of this question brought him to the following conclusion : " Fever is a complex nutritive disturbance, in which there is an excessive production of such portion of the bodily heat as is derived from chemical movements in the accumulated material of the organism ; the overplus being sometimes less, sometimes more, than the loss of heat production resulting from abstinence from food. The degree of bodily temperature in fever depends, in greater or less measure, upon a disturbance in the natural play between the functions of heat production and heat dissipation, and is not an accurate measure of the intensity of the increased chemical movements in the tissue."*

As to the mode of origin of this superfluous production of heat, different explanations are given. From the fact that the normal production of animal heat is influenced by some centre in or above the pons Varolii, which is in some degree independent of changes in the general arterial pressure, increased tissue metamorphosis, and the abnormal heat arising therefrom, is looked upon by many pathologists as the consequence of a weakened or partially paralyzed condition of this so-called " inhibitory heat-centre ; such a condition being brought about by the depressing effect of the fever producing agents in the blood.

On the other hand, the existence of calorific nerve centres is wholly denied ; and it is held that fever is entirely hæmic in its origin ; that

*Fever: A Study in Morbid and Normal Physiology. 1880. P. 240.

the processes which give rise to normal heat will, if exaggerated, produce fever ; that nervous symptoms are always secondary to nutritive disorders ; and, finally, that the evidence all points to the hyper-blood and tissue metamorphosis as resulting from the direct irritating effect of the fever poison.

Opposing the doctrine, that all heat processes goes on ungoverned by nerve centres, and upholding the more reasonable view, that the essential life process of heat production through assimilation and disassimilation is directly under nervous control. Dr. John B. Elliott,* of the University of Louisiana, has offered a very interesting and plausible explanation of fever and its phenomena. An advocate of the correlation and conservation of forces, he sets out with the proposition, that, in the healthy body, the transformation of chemical energy goes on mainly in two directions ; on the one hand, heat sufficient to maintain the normal temperature ; and, on the other, the power that lifts pabulum into tissue. Necessarily, these transformations all go on under the control of the involuntary nervous system ; and, in health, they go on regularly. When, however, the nervous system from the effect of a fever poison, becomes so disturbed as to be unable to govern the vital processes, then that energy which should have appeared as tissue building force is manifested in greater or less degree, according to the disturbance, as heat. Thus we have fever. Moreover, with the failure of this tissue building force, there is also a failure of tissue integrity inconsequence. Hence there is waste without repair ; and all the secondary phenomena of fever are directly consequent upon such a state.

Many advanced pathologists of the present time hold to a very different theory from any we have recited.

Taking for granted the germ origin of certain diseases, and considering the facts observed in ordinary fermentation. they proceed to construct and triumphantly proclaim what may be called the germ theory of abnormal temperature. Harley,† a prominent advocate of this doctrine, while holding strictly to increased heat-production and admitting that, in idiopathic and traumatic nerve derangements, the theory of inhibitory nerves and tissue metamorphosis may afford a satisfactory solution of the fever problem, fearlessly asserts that such a mode of

*"A Rational Explanation of Fever and its Phenomena" New Orleans Med. and Surg. Jour., February, 1882.

†The Diseases of the Liver, with and without Jaundice with the Special Application of Physiological Chemistry to their Diagnosis and Treatment." 1882.

origin is wholly inadequate and radically wrong in all infections, contagious and inoculable diseases. He was led to this conclusion by the fact, that sometimes the morbid temperature will continue to rise for a time even after death, thus precluding the supposition of tissue change under nerve control. He believes that, "in as far as the etiology of the increase of bodily temperature in germ diseases is concerned, the nerves, blood, and tissues of the human body merely play the part of passive agents, the abnormal heat of the body being produced by, and totally depending upon, the development, growth, and multiplication of the germs engaged in producing the disease; the pyrexia being in fact the outcome of the germ's life itself, and the rise in the temperature of their host's body nothing else than the chemico-physical effects of the heat developed by the germs respiratory activity." (P. 284). Fermentation, whether occurring within or without the animal body, is the direct effect of living organisms or germs upon organic matter. Tissue changes go on through the germs, which thus by their own vital activity develop heat at the expense of the materials which should go to the support of the tissues of the body; so that the temperature of the human body, whether living or dead, may be maintained above the normal, so long as it contains germs in sufficient numbers and pabulum for their support, just as the temperature of the vat is higher than the surrounding air until fermentation within necessarily ceases. Every pyrexial germ disease, not ending in death, runs a definite course and ends, of its own accord in a certain number of hours or days, following closely the analogy of every species of fermentation, which depends upon the length of the germ's life and, secondarily, upon the supply of organic matter to be consumed.

In regard to the self-limitation of such diseases, however, other observers have advanced more plausible explanations than the above. Certain facts indicate that the products of the vital activity of the germs themselves arrest, after a time, their further development. Many maintain that, the parasites, being propagated only in certain localities where they find a nidus suited to their special nature, their multiplication necessarily ceases with the exhaustion of their nidus; and the fever ends with the natural death of those already existing in the body.

The chief source of the morbid heat, according to the advocates of any form of this theory, is to be found in the very active con-

structive and destructive processes going on in the bodies of the germs themselves. It is held that these, in common with all organisms, require nitrogen and water for their support. These elements they greedily appropriate to their own needs, as fast as they enter the blood. Thereby they cause the great thirst and scanty secretions so characteristic of fever; and also a rapid wasting of the nitrogenous tissues of the body, by robbing them of their proper food. But, since the mere starving of tissues cannot increase their heat producing processes, it is claimed that their increased destruction which causes some of the morbid heat, is brought about by the increased activity of the circulation arising from the irritation of all the tissues directly by the germs. Since, however, increased circulatory activity can come about, so far as we know, only through the intervention of the system, the heat even in germ diseases is not wholly the direct effect of the parasites themselves.*.

Having now reviewed my subject as fully as was consistent with the short time that I might be expected to consume, I could well leave each one to his own conclusion. It will not be out of the way, however, to say that, after careful consideration both of the evidence here presented and of much not stated, the whole truth is not centered in any single theory. It can hardly be denied that, in zymotic diseases, fermentation is an independent factor, not to be ignored. But, if the nervous system exercises a controlling influence over the nutritive processes which serve for the production of normal temperature, as well as over the dissipation of heat in health—propositions, I think, that cannot be gainsaid—there is not only no reason for entirely setting aside, in time of disease, a necessary life process, but there is every reason for believing that any morbid elevation of body heat is the consequence, in great part, to say the least, of a disturbance of one or both these functions.

SNEEZING may be defined as a spasmodic action of the *paniculus carnosus* of the mucous membrane of the nose and throat whereby irritating particles of mucus are dislodged.

*For a very interesting discussion of these ideas see Boston Med. and Surg. Jour., May 15, 1879. Paper on "Typhoid Fever: Its Causes and Sources, as Explained by the Germ Theory of Diseases." Alexander R. Becker, M.D.

WHO INTRODUCED SPIGELIA TO THE PROFESSION?

By J. R. QUINAN, M.D., Baltimore, Md.

Dr. Charles S. Dolley, of the Johns Hopkins University, in a very interesting article which recently appeared in the Philadelphia *Medical Times* and also in your valuable Journal, assigns the credit of having furnished "the first account of the anthelmintic properties of spigelia" to Dr. Patrick Browne, who published his "Civil and Natural History of Jamaica," London, 1756.

In the copy of this rare work, which the doctor had the opportunity of examining at the Peabody Library, appears a manuscript letter, written on the fly-leaf, which purports to be a translation from one by Linnæus to Dr. Browne, and dated "Upsal, Oct. 19, 1756," in which the following passage occurs: "What you have delivered concerning the Spigelia against worms, is very wonderful, *since the like never was met with in the medical art, for which alone you ought to be honored with a golden statue.*"

As this credit for the discovery, or rather for the first publication, of the peculiar properties of this plant, to Dr. Browne contradicted all my previous information on the subject, I determined to reëxamine the point, and for this purpose, consulted the following works: "*The Chronological History of Plants*, by Chas. Pickering, Boston, 1879; *Caroli Linnæi Amœnitates Academicæ*, &c., Vols. 5, 1760; Pareira's *Mat. Med.*, two vols., edited by Carson, 1843; *Hortus Europæ Americanus, or a collection of 85 curious Trees and Shrubs, the produce of North America*, &c., by Mark Catesby, F.R.S., Lond. 1767 (63 Fig. 17 Cop. Pl. Quarto); Paxton's *Botanical Dictionary*, revised by Samuel Hereman, Lond., 1868; Jackson's (B. D) *Guide to Literature of Botany*; Pritzel's (G. A.) *Thesaurus Literature Botanica*; Van Sweiten's *Commentaries on Boerhaave* (Eng. Trans.) 1776, vol. xiv, art. "worms"; *Flora Virginica exhibens Plantas quas in Virginia Joan. Clayton Collegit*, Leyden, 1739-1743; Mitchell's (S. L.) *List of Early Publications on American Botany*, in New York Historical Society Collections S. I, V. 2, 1814; *Roy. Philos. Trans.*, for 1702, No. 246; Thatcher's *Medical Biography*; Chalmer's *Hist. of South Carolina*, also Ramsey's *do*; Baillon's (E. II.) *Dictionnaire de Botanique; American Naturalist*, 1870; *The Civil and Natural History of Jamaica*, Lond. 1756, by Dr. Patrick Browne; *Monthly Review*, London. 1751-9; *Roy. Soc. Rep. on Botany*, 1846-9; *Biographie Universelle*.

These works, with two or three exceptions, are to be found in the Peabody Library. I sought also for copies of Ray's *Historia Plantarum*, Lond., 1686; Petiver's *Gazophylaci Naturæ et Artes*, &c., Lond., 1702; Drs. Lining and Garden's *Essays and Obs. Phys. and Lit.*, but could not meet with them in any of our public libraries. I hope some of my readers may be more fortunate.

A careful collation, however, of the authorities I consulted, justifies the assertion, that our first knowledge of spigelia, in regard to its botanical relations, was obtained from the researches of the English Botanist, John Bannister, who about 1680, sent over to Mr. Ray, a catalogue of Plants discovered by him in Virginia, including the one in question, and published by Ray in his *History of Plants* (s. 260) 1686, (Pickering *op. cit.* 961-2); that Petiver (*op. cit.*, 59.10) next noticed it, 1702; that Dr. Lining, of South Carolina, was the first to publish an essay on its anthelmintic powers, which appeared in the *Edinburgh Transactions*, 1754, thus antedating Patrick Browne's publication of it, by at least two years.


How these historical facts are to be reconciled with the priority of discovery conceded by Linnaeus to Dr. Browne, in the letter referred to by Dr. Dolley, is a difficult matter, unless the 'knot' is to be cut by denying the authenticity of the manuscript letter. No one will dare question the profound acquaintance of Linnè with everything relating to the literature of his favorite science, and indeed, in the collection of essays edited chiefly by himself, *Amoen. Acad.* Ed. of 1760, vol. 5, p. 140) appears a Thesis by John G. Colleander, on "Spigelia Anthelmia," dated Upsal, 1758, in which the author gives the priority of discovery to Dr. Lining in the following words: "de cetero ex literis a Dr. John Lining Caroli Stadii in Carolina ad Dr. Robert Whytt missis in Act. Edin., 1754, p. 386 relatis alia anthelmia commemoratur quæ a priori videtur distinctissima, an hæc spigelia Browne, Jam. 367"; showing, that if the *pupil* was familiar with Dr. Lining's Essay on the Spigelia, communicated to Dr. Whytt, and which the latter published in the *Edin. Trans.*, 1754, surely his *master*, Linnè must have been equally well informed of the same fact. And this throws strong doubt upon the genuineness of the letter found by Dr. Dolley; but whether so, or not, the "golden statue" is certainly due to Dr. John Lining, of South Carolina and not to Dr. P. Browne.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

A VACCINE CRUST WHICH PRESERVES ITS ACTIVITY MORE THAN HALF A CENTURY.

An unexampled case of long preservation of vaccine has been recently brought to our knowledge by Dr. Willis Alston, of Littleton. During the term of office of the Hon. Willis Alston, grandfather of Dr. Alston (as Representative in Congress from North Carolina 1803 to 1825, Wheeler), Dr. James Smith, of Baltimore, was Director of the Vaccine Institution, for the State of Maryland. He sent to Mr. Alston a package of vaccine which remained unopened until it fell into the hands of his grandson, Dr. Alston, in May, 1869. The vaccine was imbedded in wax, and all enclosed in a wooden box. The following directions, dated 17th March, 1812 accompanied the package; but it is not known whether or not the vaccine was of the same of the date, or whether this was a stereotyped slip in use for several years:

Pro mutua omnia provisum sunt.

THE Vaccine Matter herewith transmitted is contained in the scab or dark coloured crust which is set in the wax. When it is used, it must be dissolved, with a little cold water applied to it on the point of the lancet, or vaccinator, with which the operation is to be performed. Make a slight incision in the arm not exceeding one-eighth of an inch in length, into which the dissolved infection must be immediately inserted. If two or three incisions are made parallel with and very near to each other, the chance of succeeding in the operation will be much greater without giving any additional inconvenience to the patient.

If the patient, or practitioner is unacquainted with the effect to be produced by the operation, let him be careful not to disturb or interrupt the vaccine process, by scratching, bruising or injuring the Pock in any manner, or by making applications of any kind to the arm. The disease ought to have its full effect and free operation ; it is never attended with any danger.

On the eighteenth day after the operation, or as soon as the scab gets loose, it should be taken off and wrapped up in a little fine lint or cotton ; then folded in a piece of clean white paper, on which must be written the name, age, and place of residence of the person from whom it was taken. Let the date of the operation, and the time when the scab was taken off, also accompany it.

If the above directions are observed, the patient by enclosing the scabs in a letter, and forwarding them to this Institution, for EXAMINATION, may obtain an equally certain proof of his safety, as if he had been visited by the subscriber every day during the whole process of his vaccination ; and if any operation may be found to be imperfect or ineffectual, the necessary precautions to be taken, will be particularly and promptly given in a letter of advice. It is of but little consequence by whom, or where the operation has been performed.

If any communication is forwarded by mail, the postage must be paid, otherwise no letter will be taken from the office. In every case submitted for examination, a fee of one dollar must be paid for the certificate, opinion, or letter of advice, which will be given.

JAMES SMITH, Director of the
Vaccine Institution, for the State of Maryland.

Baltimore, 17th March, 1812.

The first successful Vaccination was performed in England, by Doctor Edward Jenner, the illustrious discoverer of this remedy, on the 14th day of May, Anno Domini 1796.

In May, 1869, Dr. Alston vaccinated his servant with a part of the crust, "and in due time" he writes "it took effect leaving a well-defined scar." He writes subsequently when interrogated more particularly: "In reply to your inquiry. 'Did your vaccination go through the regular stages of papulation, vesication, dessication, and separation of the crust, leaving a genuine wheel-shaped, foveolated cicatrix?' I will say it did, and the results were as satisfactory as any I ever had from any crust, bovine or otherwise."

This is undoubtedly the longest time on record of the preservation of vaccine virus. It will be remembered how difficult it was to procure active virus in the early days of the practice. Most of the seed virus sent by vaccine establishments in Great Britain to this country lost its activity in the short period of a voyage across the ocean.

It gives us peculiar pleasure to publish this item, for as we have given our readers the history of the "North Carolina Accident" as it was called, showing what great damage was done by small-pox virus sent by mistake to Dr. Ward, of Tarborough, by Dr. Smith, this will serve, if any proof was needed, to show that Dr. Smith not only knew good vaccine as early as 1812, but that he knew the art of preserving it.

May not this very case serve to lead us to question whether or not it is wise to abandon Bryce's method of storing vaccine in the shape of a crust. It will be seen above that Dr. Smith had full confidence in his ability to determine the genuineness of a vaccination by the resulting scab, and he was not alone in placing his reliance upon this means of diagnosis—it was generally believed in. To-day, it is almost a lost art, both as a diagnostic point and as a reliable means of transmitting vaccine. With this as a starting point, particularly as humanized vaccine is again growing into favor, nothing is more likely to result than a perfected plan for determining the genuineness of crusts, and preserving them for vaccinations after protracted storage.

TALL GUESSING.—A candidate for license to practice medicine in North Carolina, (and by the way an unsuccessful candidate) when asked "Who discovered vaccination?" replied "Virch-cow."

THE RALEIGH MEETING OF THE NORTH CAROLINA MEDICAL SOCIETY.

The thirty-first meeting of the State Medical Society which took place in Raleigh last month, as we predicted was one of great importance. Large preparations had been made for it by the Raleigh profession. All that hospitality could do to make a meeting a success, was done, and the impression left upon the guests of the Raleigh Academy of Medicine, and of the citizens, on their return home was, that they had never before seen Raleigh in such a good humor, and that no city in the State could excel it in the kindness and bounteousness of her attention.

The result of the election of members of the Board of Examiners was highly satisfactory, and as the list of the seven successful candidates was read over after nearly a day of balloting, it caused a feeling of exultation to know that in a large society where the arts of the canvasser could have been successfully employed to secure one of the places,—undoubtedly the choicest and most honorable positions the State profession can confer—that the choice fell upon gentlemen of the highest standing in their section. The remarks of one of the prominent gentlemen in nomination, we take to be an index of the feeling of others in reference to their fitness as members of the Board. He said, in effect ; my friends have misconceived my qualifications. I would not shrink from any duty this Society could place upon me, but I know myself sufficiently well to say that I ought not trust myself to sit in judgment upon the qualifications of applicants for I would hardly have the heart to reject one if I found him unprepared. Such candor only raised the gentleman in the esteem of his friends, and it also had its influence upon other nominations. That there was electioneering before the final vote of the second day was taken was plain enough, but the Society escaped the vulgar methods used in some other bodies, to a great degree. We venture to say that no persons could have been more completely surprised, both at their nomination and election than the first five gentlemen elected.

What shall we say about the literary work ? Perhaps nothing ought to be said until the papers have been collected by the publication committee. It was very evident, though, that there would be no opportunity in such a crowded session, to get the attention of the

audience to any but papers which would be delivered in a spirited manner. Even if the Society had been in a mood to hear papers, the schedule for entertainments left nothing but fragments of mornings and afternoons for such serious work, and the balloting for members of the Board rather unsettled the minds of some of the seriously disposed members. At any rate a few papers were read entire, a few by title, but the greater number were carried home by disappointed members. As several of the contributions will appear from time to time in these pages it is not necessary to anticipate their quality.

The discussion of the time and place of meeting is one of the peculiar yearly performances of this body, always consuming time, and always ending with the same conclusion at last. It would be well to have this matter settled by some business committee like that on Nominations. Many other minor matters would be kept out of of the general meetings with advantage.

The motion instituted looking to the amendment of our present law, so as to make it a misdemeanor for any person to practice medicine in the State without a license, came near being defeated, and simply on the ground, if we understood the argument of the speakers in opposition, that our Legislature was so uncertain a body, that any agitation of the question was more likely to result in a repeal of the law, than in its amendment as proposed. We believe it was unanimously conceded that such an amendment was very desirable. A committee was finally appointed to watch the complexion and attitude of the legislature and make an effort for the desired amendment, if they deem it advisable. Everything will now depend upon the discretion of this committee, and upon the influence individual members can bring to bear with their representatives. The action of Virginia makes it necessary for our State to so amend the licensing law, as to put our citizens properly on the defensive.

The resolution introduced by Dr. W. H. H. Cobb, of Goldsborough, pledging every member of the Society to a personal examination of every applicant as a student of medicine, before he is allowed to enter upon a course of study, as an expression of the feeling of the Society in the matter of education, is a good movement. According to the phraseology of the resolution it will be observed, that the amount of education required is left to the opinion of each practitioner, not specifying as in the case of the Ohio Medical Society

the amount of Greek, Latin and other preliminary knowledge the candidate must have accomplished, but it goes far enough for the beginning of a reform. Let each physician conscientiously examine every applicant, and there will be a great difference in a few years as regards the final standing of our doctors. The very fact that an examination is required, will induce young men who intend to become medical students to take more pains in their preparation, and to enquire as to the character of the studies required. This is not a smaller beginning than our State Board of Examiners made, and see what a great work they have built !

We have received a few letters from new licentiates pointing out the omission of their names from the list. We would explain that the May JOURNAL could not be held longer for the reporter's and secretary's notes, and that this number will contain the completed list.

The Committee on Publication ask that any omissions or errors be called to their attention at once, and any letter addressed to the JOURNAL, box 791, will receive prompt attention.



“NORTH CAROLINA, West Virginia, Alabama, Florida and Mississippi are the only Southern States which have no Medical Colleges.” This item has gone the rounds of the medical journals, and we hope now it may have the desired effect of inducing some of the States having medical colleges to cease their puny efforts, and aid in building up first class colleges as we are trying to do in North Carolina.

LACTOPEPTINE.—The old bottle of *Pulv. Sorbens* which stood at the right hand of the marble slab and nearest to the generation of doctors now passing away, has long ago been replaced in the summer months by digestive ferments, even in the hands of the gentlemen mentioned. The most reliable, and most uniform, and by far the one which has the widest use, is lactopeptine. We venture that it enters into half the prescriptions in this country for infantile diarrhœa.

REVIEWS AND BOOK NOTICES.

HOOPER'S PHYSICIAN'S VADE MECUM : A Manual of the Principles and Practice of Physic ; with an outline of General Pathology, Therapeutics and Hygiene. Third Edition. Revised by WM. AUGUSTUS GUY, M.B., Cantab., F.R.S. Vol. 1. New York. Wm. Wood & Co., 56 and 58 LaFayette Place. 1884.

This is the May number of Wood's Library. It is an elementary volume of much importance, well arranged for ready reference. It attempts a large number of topics, and necessarily treats most of them superficially. The names of Drs. Guy and John Harley on the title page, is a sufficient guarantee that the book has been honestly revised. There is still another volume of the *Vade Mecum* to be issued and we may have more to say when it appears.

BRAIN EXHAUSTION, WITH SOME PRELIMINARY CONSIDERATIONS ON CEREBRAL DYNAMICS. By J. LEONARD CORNING, M.D. New York : D. Appleton & Co., 1, 3, and 5 Bond Street. 1884.

The sub-title of this handsome octavo really indicates its most important part, and it would read better if transposed. The reading public have for so long been plied with books with popular titles to catch the eye, and arrest the attention of the newly awakened unsanitary sinners, that the more sober reader is rather incined to pass by a book with a title like the one our author has selected. We assure our readers that this volume is far more than its title indicates, and that its contents comport with its beautiful paper and press work.

Some of the paragraphic titles will indicate the scope of the subject: "The Relation of the Law of the Convertibility of Forces to the Healthy and Morbid Brain, and on Cerebral Metamorphosis"; "The Emotions of the Healthy and Morbid Mind"; "Brain Exhaustion," "Incidental Hypochondriacal Accompaniments of Cerebral Exhaustion"; "On a Certain Lachrymose Condition in Man, its Pathology and Diagnosis"; "Predisposing Causes of Brain Exhaustion"; "False Educational Conception and Methods;" "Effects of Tobacco and Alcoholic Excesses on the Brain;" "Mental Hygienics"; "Of the Relation of the Blood to Muscle and Brain;" "Inductive and Deductive Considerations on the Relation of Certain Kinds of Food to the Evolution of Mental Phenomena"; "Rest;" "Medication;" "Electrization of the Sympathetic Nerve with Simultaneous Bilateral Compression of the Carotids."

We believe that since the subject of "brain exhaustion" or "brain overwork" has become a fashionable topic of the day, there is rather a tendency to ascribe many disorders of the brain to overwork, whereas the true interpretation is that over indulgence in stimulants is the overwhelming cause. Dr. Corning has considered this part of the question with fairness, although in his effort to avoid moral questions which unavoidably merge into it, he fails to emphasize sufficiently the damaging effects of bad habits.

ORIGIN OF THE USE OF TOBACCO AS A MEDICINE.

Sir John Nicot, ambassador of the King of England to Portugal from 1559 to 1561, received a present of this then strange plant from Florida. He planted it in his garden, where it grew abundantly, and finally heard that a man had been cured of a *noli me tangere* on his cheek, near unto his nose, and which already had begun to take root at the gristles of his nose, by applying tobacco-juice and the bruised herb. From that time forward this plant began to be famous throughout all Portugal for ulcers of the leg, ringworm, and scrofula. It was finally sent to France to help Lady Montigny, who suffered with an ulcer bred in her breast, and the Countess of Ruffe to heal her face. The Lord of Jarnac caused the nicotine to be distilled and drank, mingled with the water of euprasia, otherwise called eye-bright, by one that was short-breathed or asthmatic, and it cured him. When the juice was absorbed it sometimes made the patient exceedingly uncomfortable.—*N. Y. Medical Record.*

MESSRS. A. A. MELLIER, of 709 and 711 Washington Avenue, issue a handsome catalogue of Surgical Instruments, which may be had on application. The mails bring St. Louis as near to our doors as New York, and the liberality of this firm may be relied on.

CURRENT LITERATURE.

AN IMPROVED FORM OF LAUDANUM.

T. & H. Smith, Chemists, Edinburgh, in the *Brit. Medical Journal*, May 24, describe a process for an improved form of laudanum.

Taking the proportion of opium prescribed by the Pharmacopœia (Br. Ph. 1½ oz.) for one pint of laudanum, exhaust it with distilled water, and evaporate the aqueous solution on the water-bath to a syrupy state. The extract is thinned with water as long as any separation is produced, about half-a-pint of water being required for this purpose ; the liquid is then filtered, or allowed to settle. The separated matter varies in its nature, but always gives, when burnt, an earthy ash, and, if properly washed, is quite void of any virtues peculiar to the drug. The clear liquid, so far purified, is strongly acid, and contains all the principles of opium which are possessed of any activity. The excess of acid is neutralized, the neutralization being effected by the addition of hydrate of lime, of which about ten grains are found almost invariably to be required for the purpose. The lime is added in the state of very fine powder, and the liquid, after addition of the proper quantity, ought to be, or rather must be, very faintly acid.

The liquid is next filtered, and the powdered precipitate carefully washed. The precipitate when dry, amounts to about 45 grains, and consists principally of meconate of lime, narcotine, and papaverine. The chemists have proved in their own persons, that in doses of two grains, this precipitate has little appreciable effect.

The clear filtered liquid is now evaporated to the bulk of about two ounces, then mixed with an equal bulk of rectified spirit, and made up to the measure of sixteen ounces with proof spirit of the Pharmacopœia strength. The liquid is now filtered, and the filter washed with as much proof-spirit as may not make the bulk of the filtrate more than one pint.

Lastly, to prevent the possible formation of some basic compound of any of the active principles, and to separate a very small quantity of lime, five minims of strong sulphuric acid are added ; a small quantity of sulphate of lime soon settles as an insoluble precipitate at the bottom of the vessel, leaving the finished tincture quite bright.

The tincture thus prepared has the same strength as the laudanum of the Pharmacopœia; this, the Messrs. Smith affirm from personal experience. It contains all the principles of the opium that are contained in the laudanum of the Pharmacopœia, except a very minute quantity of meconic acid, the narcotine, and papaverine. It contains the morphia, the codeia, the cryptopia, and thebaia, as meconates, thebolaetates, and sulphates, equivalent to the sulphuric acid added, so far as unappropriated by the lime, the narceine, the meconine, the papaverine, except a mere trace, and the meconoisine.

The taste of the new laudanum made after the process above described is a pure bitter, possessing none of the repulsive taste and smell attaching to laudanum of the old process. It forms a clear liquid when mixed with water and its color is paler, because of the separation of inert coloring matter.



THE PROXIMATE PROTEID CONSTITUENTS OF THE WHITE OF EGG—A PRELIMINARY NOTE.

By EDWARD T. REICHERT, M.D.,

Demonstrator of Experimental Therapeutics, University of Penn.

For many years the white of egg, after being freed from its membranous net-work, was considered to be an almost pure egg-albumen; but the comparatively recent researches of Lebonte and Goumœns (*Journ. de Pharm.*, 3 s., xxiv. 17) and Scherer show that this belief is not true. Lebonte and Goumœns found that the white of egg is a mixture of two albuminous bodies, one being soluble and the other insoluble in glacial acetic acid, while Scherer observed that if a small quantity of acetic acid were added to the white of egg to neutralization, and the mixture diluted with a large amount of water, a flocculent precipitate was soluble in a small quantity of potassic nitrate or sodic chloride, and that these solutions were coagulable.

Recent researches of my own go a step beyond this, and determine that the body which is insoluble in acetic acid is a *globulin*. I have, moreover, made the very remarkable discovery of the existence of a third albuminous constituent in the white of egg, which possesses the extraordinary property of not being precipitated in

weak alkaline solutions by mercuric chloride. This body is no doubt a PEPTONE, since it gives the Xanthoproteic and Millous reactions, and is not precipitated or coagulated by boiling, not precipitated by strong nitric acid, carbonic acid, sodic chloride, cupric sulphate, or ferric chloride. It is precipitated by tannic acid. There seems to be still another proteid present which is not coagulated by boiling, unless the solution has been previously neutralized, and which is precipitated by strong nitric and mercuric chloride. The dialysate of the white of egg gives the Xanthoproteic reaction.

The existence of a peptone in the white of egg is doubly interesting, since this is only the third peptone ever discovered as existing as a natural constituent of a secretion,—the first having been discovered in milk, and the second by Dr. S. Weir Mitchell and myself as existing in the venoms of various snakes.

These results are of such importance that I have felt justified in announcing them in advance of the completion of the study of these bodies.—*Philadelphia Medical Times*.

THE NUMBER SEVEN.

Hippocrates says the septenary number, by its occult virtues, tends to the accomplishment of all things, and is the fountain of all the changes in life ; and like Shakespeare, he divided the life of men into seven ages. The teeth sprang out in the 7th month or sooner, and are shed and renewed in the seventh year, when infancy is fully changed into childhood ; at twice 7 years puberty begins ; at 3 times 7 the adolescent faculties are developed, manhood commences, and men become legally competent to all civil acts ; at 4 times 7 man is in full possession of all his strength ; at 5 times 7 he is fit for all the business of the world : at 6 times 7 he becomes wise, if ever ; at 7 times 7 he is in his apogee, and from that time decays ; at 8 times 7 he is in his first climacteric ; at 9 times 7, or 63, he is in his last or grand climacteric ; and at 10 times 7, or three score and ten, he has approached the normal period of life.—*N. Y. Medical Record*.





